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## BRANCH OFFICES

GLASGOW: 87, Union Street . . . . . Central 4646  
NEWCASTLE-ON-TYNE: 21, Mosley Street . . . . . Newcastle-on-Tyne 22235  
MANCHESTER: Century House, St. Peter's Square . . . . . Central 3101  
BIRMINGHAM: 81, Edmund Street . . . . . Central 3049  
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## Shirking the Issue

THE reply of the Minister of Transport to a Parliamentary question, recorded elsewhere in this issue, on the responsibility of the Government for the drastic train cuts on British Railways, is a sophism, and an example of Ministerial unwillingness to take the blame when things go wrong in a nationalised industry—even though credit is taken for whatever has gone right, as the utterances of Government spokesmen so often show. In fact, when the Minister of Transport directed the Railway Executive to save large quantities of coal, it must have been known that this could only lead to suspension of passenger services. No other measure on the part of the railways could have saved the required quantity of coal a week; by far the most of the coal used by the railways is locomotive coal, and, in the present economic crisis, cancellation of freight services might have deplorable results. The plight in which British Railways and their users now find themselves therefore is the result partly of the failure of the National Coal Board to produce enough coal for increased national needs and partly of mistaken Government optimism or of lack of courage to

state the unpleasant truth to those who must act on it. It is moreover doubtful whether the saving of 10,000 tons of coal a week suitable (it is stated) for domestic consumption justifies the economic dislocation caused by the new drastic withdrawals of trains. For financial reasons, as stated recently in this journal, passenger train services long before the coal shortage declared itself had been reduced to the minimum consistent with commercial expediency. If the first cuts of three or four weeks ago caused little hardship to travellers, that is no longer true; some indeed of the cancellations, as of the "Atlantic Coast Express," are bringing passenger timetables back towards wartime levels. The consequences to the railways will be serious. The decision to require the railways thus to sacrifice themselves seems based partly on a perverted desire for fair shares (at any cost) for all—though it seems that the railways also are included in the all-round cut in industrial coal—and partly on a wish to impress on the public the seriousness of the situation: as to the latter, no better way could have been chosen.

## Railway Wages

A FURTHER increase in the deficit on the railways will be one of the chief consequences of implementing the recommendations (of which details are given elsewhere in this issue) of the court of inquiry into railway wages and conditions if these are accepted by the parties concerned. To offset even part of the £7,000,000 cost incurred, a great effort must be made to effect every possible economy, including increased output per man. The court rightly states that the wage increases which it recommends are the maximum amount within the capacity of the railways to pay without imposing intolerable burdens upon them, and this may well be an understatement. In trying to hold the balance between the principle of a minimum wage for lower-paid railwaymen and that of relativity between different grades, the court has had to compromise, which may not be popular with any of the grades concerned; nor may the recommendations as to working conditions. The reference to the deplorable results of inter-union rivalry and lack of co-ordination is timely and well merited, as is its reminder that a main object of nationalisation is to provide an opportunity, through integration, of increased economies—a point not yet grasped by many transport employees.

## State Control of Steel

AT his first press conference on February 13, Mr. S. J. L. Hardie, Chairman of the Iron & Steel Corporation of Great Britain, which took over 80 companies in the steel industry on Thursday last, stressed the point that the nationalisation of steel was different from that of other nationalised industries in that the individual firms retained their identity, though in this connection it must be pointed out that the Corporation has the power to approve the selection of directors of these firms. Mr. Hardie, referring to the responsibilities of the new undertaking, spoke of the need for viewing production from a wider national angle, but so far as steel is concerned there is little new in this. There is no doubt that his appeal for co-operation in day-to-day working will be met—indeed any falling off in steel output would be a serious matter—and members of the Iron & Steel Federation are acting in a consultative capacity even if unwilling to serve on the Corporation itself. It is estimated that the outstanding capital commitments to be fulfilled this year total £100,000,000 and the Corporation has already arranged to meet instalments for development schemes this year of £20,000,000. When the financial provisions for the next stage of these schemes have been approved the total capital commitment may be close on £500,000,000.

## Institution of Locomotive Engineers

THIS year, under the presidency of Mr. R. A. Riddles, C.B.E., Member for Mechanical & Electrical Engineering of the Railway Executive, marks the fortieth

anniversary of the foundation of the Institution of Locomotive Engineers, the inaugural meeting of which was held on February 4, 1911. The fortieth annual general meeting is being held on March 21, on which day Mr. E. S. Cox, Executive Officer (Design), Railway Executive, will present a paper dealing with the new standard locomotives for British Railways. The first of these, No. 70000, a Class "7," 4-6-2 mixed-traffic locomotive, was described and illustrated in our February 2 issue. Mr. Cox's paper is being awaited with considerable interest, for it is expected to give a good deal of the background of the development of the locomotives and the reasons for some of the decisions which have been taken in their design. A better choice could hardly have been made for the fortieth annual meeting paper, for Mr. Cox is not only well known for the excellence of his contributions of this kind but occupies a unique position in the field of British locomotive design.

### Extension in Tanganyika

THE Tanganyika Legislative Council has approved an extension of the Southern Province line of the East African Railways from its present terminus at Nachingwea to Lomasule Juu, 60 miles further west, in conjunction with a plan to develop, mainly for agriculture, large areas of the province and avoid the loss of development work carried out under the original groundnuts programme. It is proposed to raise a loan of £750,000 to meet the cost of construction and, with the Overseas Food Corporation, undertake guarantees, which may amount to £17,500 a year, in connection with financing the railway and the port of Mtwara, where two deep-water berths are to be built. The Corporation will pay four-fifths and the Tanganyika Government one-fifth of a deficit on the operation of the port and the whole railway to Lomasule Juu for a period of ten years. Sir Edward Twining, Governor of Tanganyika, said that he had been advised that it would be possible to begin the proposed extension after May, 1952. The Southern Province line was described in our December 16, 1949, issue.

### The New Station at Enschede

ENSCHDE is a manufacturing town of more than 100,000 inhabitants, situated in the Dutch province of Overijssel, near the German border. It is on a branch of the Netherlands Railways from Hengelo, a junction on the main line from Amsterdam and the Hook of Holland to North Germany and Denmark, and is served by some 90 trains a day. The design of its new station, which forms the subject of an article elsewhere in this issue, shows great originality and is a tribute to Dutch architectural skill in the face of shortage of materials. A virtue has been made of the necessity of using concrete throughout; ornamentation in pre-fabricated concrete is a particularly noteworthy feature. Because of their excellent finish, reinforced concrete shuttering units for concrete beams were allowed to remain in position. The building has a single storey, with a clerestory roof to the vestibule, but the roof line is broken by a combined chimney and clock tower of striking appearance, suggestive of a Moorish minaret. The facilities include ample accommodation for cycles, and a restaurant with a terrace flanking the street.

### Design and Construction of Rolling Stock

IN a paper dealing with the design and construction of rolling stock, presented to the British Railways, Western Region, London Lecture & Debating Society on February 1, Mr. H. Randle, Carriage & Wagon Engineer, Western Region, said that forward planning in the construction of rolling stock in railway workshops was necessary to ensure even distribution of work. Different types of rolling stock varied the loads placed on individual shops and to obtain an evenly balanced load, one had to build several designs of stock simultaneously. It was also necessary to co-relate supplies of raw materials to the works building programme to maintain efficient production. Mr.

Randle said that the types of rolling stock required were decided by the user departments and were related to the probable condemnation of existing rolling stock. The paper also dealt at some length with the various processes and the more important machines and equipment used in the production of carriages and wagons. Building programmes for rolling stock were normally arranged two years in advance of commencement of the work in the shops, the interim period being occupied by preparation of detail drawings, drawing up of specification, co-relating raw material, and the preparation of building programme schedules.

### A Case of Gross Negligence

ALTHOUGH the reports of the Inspecting Officers of Railways necessarily express opinions on the way in which a certain railway servant has acted and the degree of responsibility attaching to him, it is not often that it is necessary to speak quite so strongly as Brigadier C. A. Langley felt obliged to do in his report on the collision on May 13, 1950, between a passenger train and a light engine at Whitehouse West Junction, a summary of which appears in this issue. The signalman assumed, from hearing the noise of a train on a main line bridge alongside, which he took to be caused by the engine, that it had moved away, although he admitted that he had not seen it, or noticed its tail light. He then cleared his signals for the train. Whether or not he had pulled off a ground signal for the engine was disputed; the enginemans said that the crossover alone was operated. In any case they, too, failed to obey rules. The inquiry brought to light a number of irregularities committed by this signalman, who actually infringed a rule when bringing the engine forward to the crossover. The report makes very unpleasant reading, and, from other circumstances which have emerged during inquiries of late years, we cannot help feeling that the general question of the training of signalmen calls for some attention.

### High-Speed Tyre Turning

A NEW wheel lathe, installed by the Southern Pacific Lines, U.S.A., at Los Angeles, has halved the time for truing the tyres of a pair of wagon or coach wheels. This 50-ton lathe can handle wheels of from 26 in. to 52 in. dia., and it requires three motors, one of 75 h.p. for driving, one of 10 h.p. for traversing the headstock, and one of  $\frac{1}{2}$  h.p. for the lubricating pump. The use of carbide-tipped tools permits the higher spindle speeds, up to 24 r.p.m., with cutting speeds from 125 to 165 ft. a min. A deeper cut can be taken with carbide than with high-speed steel cutting tools, as the carbide tends to cut through the metal rather than "pushing" it off, and for the same reason the carbide is capable of slicing through hard spots, whereas with high-speed steel it was often necessary to take an extra deep cut on the tread to get down to the softer metal. Normally no coolant is required with the carbide tools; by experiment, the maximum cutting speed that may be used without undue heating has been determined, and to this speed the lathe is limited. One of these carbide-tipped tools makes a complete tread cut on a wheel in about 11 min., leaving an excellent glazed finish, and the lathe itself is capable of turning a pair of wheels in about 40 min., as compared with the 80 min. with lathes previously in use.

### New Locomotives for Bolivia

TO supplement motive power on the Cochabamba and Potosi sections, the Antofagasta (Chili) and Bolivia Railway placed orders with Beyer, Peacock & Company Limited for the supply of six Beyer-Garratt metre-gauge articulated locomotives with an axleload of  $14\frac{1}{2}$  tons and a tractive effort of 55,190 lb at 85 per cent. boiler pressure. This order is a result of the satisfactory performance under most arduous conditions of the articulated locomotives previously supplied to the railway by this firm, the first of which were delivered in 1913. A further number was supplied in 1928; these engines were of the 4-8-2+2-8-4

wheel arrangement and were described as the largest and most powerful metre-gauge locomotives built at that time. The locomotives are arranged to burn oil fuel and have enabled the railway to dispense with double-heading. The new locomotives, of the same wheel arrangement as the prototype, are described and illustrated elsewhere in this issue, and have been built to the requirements of the Chief Mechanical Engineer of the Bolivia section of the railway, Mr. R. A. Payne, in consultation with the Chief Mechanical Engineer of the Chilean section, Mr. J. Hopwood.

### British Transport Commission Traffic Receipts

**D**URING the first four-weekly period of this year British Railways receipts were only 6.6 per cent. up on the corresponding period of 1950. The only traffic fully to reflect the rate increase of last May was coal and coke, receipts for which increased by 16.6 per cent., or exactly the amount of the rate increase; this means that the tonnage was the same. Mineral traffic, which for the last period of 1950 was 12 per cent. over the previous year, in January was only some 9 per cent. over the first period of 1950. Merchandise receipts exceeded those of last year also by only 9 per cent., against 18 per cent. for the preceding four-weekly period: this does not represent a decline in tonnage compared with Period 13 of 1950.

Passenger receipts were nearly 7 per cent. down on the first period of last year, whereas for the preceding period they were 1.7 per cent. down on the previous year (the latter partly because of increased Christmas holiday travel). It is unlikely that the cuts in passenger train services to save coal, which applied to only part of the period, and were at that time insignificant, would have had affected receipts to this extent.

	Four weeks to January 28		Incr. or decr.
	1951	1950	
	£000	£000	£000
<b>British Railways—</b>			
Passengers ... ..	5,633	6,052	419
Parcels, etc., by passen- ger train ... ..	2,247	2,052	195
Merchandise & livestock ... ..	6,811	6,227	584
Minerals ... ..	2,578	2,369	209
Coal & coke ... ..	6,329	5,424	905
	23,598	22,124	1,474
<b>Road Passenger Transport—</b>			
Provincial & Scottish— Buses, coaches & trolley- buses ... ..	2,596	2,461	135
<b>London Transport—</b>			
Railways ... ..	1,192	1,123	69
Buses & coaches ... ..	2,274	2,242	32
Trolleybuses & trams ... ..	740	800	60
	4,206	4,165	41
<b>Inland Waterways—</b>			
Tolls ... ..	56	52	4
Freight charges, etc. ... ..	58	64	6
	114	116	2
<b>Total ... ..</b>	<b>30,514</b>	<b>28,866</b>	<b>1,648</b>

London Transport railway receipts, on the other hand, were 6 per cent. above the previous year, partly perhaps because of the putting into force in October of the London Charges Scheme. Bus receipts were 1.4 per cent. above the corresponding figure for 1950; and tram receipts were 7.5 per cent. down, largely because of substitution of bus for certain tram services in 1950. B.T.C. road transport (provincial and Scottish) receipts were some 5 per cent. over last year. From this (taking into account, however, acquisitions by the B.T.C. of bus undertakings during the year) it is possible only to infer a steady drift away from the railways as a means of travel.

The total receipts of the Commission for four of its activities—but excluding road haulage receipts, which now exceed those of London Transport—were less than 6 per

cent. above those for the first period of 1950, largely as the result of the railway rate increases of last May.

### PERCENTAGE VARIATION 1951 COMPARED WITH 1950

	4 weeks to January 28
<b>British Railways—</b>	
Passengers ... ..	6.9
Parcels ... ..	9.5
Merchandise & livestock ... ..	9.3
Minerals ... ..	8.8
Coal & coke ... ..	16.6
<b>Total ... ..</b>	<b>6.6</b>
<b>Road Passenger Transport ... ..</b>	<b>5.4</b>
<b>London Transport—</b>	
Railways ... ..	6.1
Buses & coaches ... ..	1.4
Trolleybuses & trams ... ..	7.5
<b>Total ... ..</b>	<b>0.9</b>
<b>Inland Waterways ... ..</b>	<b>1.7</b>
<b>Aggregate ... ..</b>	<b>5.7</b>

### Rhodesia Railways

**T**HE report of the Rhodesia Railways for the year ended March 31, 1950, which has been received from Sir Arthur Griffin, General Manager, reveals a period of considerable consolidation and advance. It includes the working of the Vryburg-Bulawayo section, administered by the South African Railways on behalf of the Rhodesia Railways.

Despite difficulties the progress made followed reasonably closely the plans originally prepared, and the three main problems of equipment, staff, and housing are on the way to solution. Fresh industrial activity, however, has to be provided for continually, and development of the system is unlikely to slacken for some years. The pace of growth at a time of inflated and increasing costs is causing apprehension, but the tone of the report is optimistic and forceful, even though there is a serious shortage of both European and African labour and of constructional capacity. This is limiting the development of the country. Another big factor is the relative inefficiency of African labour. A call is made for more contractors "prepared to work at reasonable profits." Staff wastage, which militates against efficient operation for which special training and experience are necessary, is a problem, although conditions of service are claimed to be as good as anywhere.

The following are some of the principal results:—

	1948-49	1949-50
Mileage open ... ..	2,436	2,436
Gross ton-miles (thousands) ... ..	4,377,433	4,984,198
Net ton-miles (thousands) ... ..	2,000,254	2,265,021
Average haul (miles) ... ..	423	421
Train engine-miles ... ..	6,818,559	7,818,934
Engine-miles ... ..	8,096,756	9,249,465
<b>Tonnage conveyed:—</b>		
General merchandise ... ..	1,953,888	2,276,807
Coal & coke ... ..	1,706,105	1,903,713
Minerals ... ..	1,065,073	1,197,141
<b>Total tonnage conveyed ... ..</b>	<b>4,725,066</b>	<b>5,377,661</b>
<b>Total passenger journeys ... ..</b>	<b>2,307,177</b>	<b>2,374,222</b>
	£	£
<b>Receipts:—</b>		
General merchandise ... ..	4,702,399	5,641,047
Coal & coke ... ..	941,444	1,032,035
Minerals ... ..	1,571,132	1,655,066
Livestock ... ..	83,052	112,222
Coaching ... ..	1,267,783	1,324,909
Road motor services ... ..	180,256	255,144

Revenue on working account for the year reached a record total of £10,265,782 (an increase of £1,311,088 over the previous year), against which, however, expenditure increased by £1,744,869 from £6,956,480 in 1948-49 to £8,701,349 for 1949-50—also a record figure—giving a balance of £1,564,433 for the year, £433,781 less than for the previous year. General merchandise traffic mainly caused the increase in receipts; but the tendency is for a more than proportionate increase in lower-rated traffic, and unless the ratio of general goods to minerals can be maintained at its former level, the question of rate revision will inevitably come to the fore.

Expenditure on capital account was £5,008,523, mainly on engines and rolling stock, which accounted for £3,252,766. Other major items were buildings, land, permanent way, and machinery. The total as at March 31, 1950, was £32,863,714. Operating costs rose steadily during the year, due mainly to improved conditions of service, higher costs of consumable stores (including coal), and increased charges

by the South African Railways for working the southern section and for rolling stock in interchange. Serious consideration is being given to the narrowing margin between operating costs and revenue.

The ever-increasing pressure of traffic absorbed all new rolling stock, power, and personnel, as it became available, and left no reserves. Dollar-earning or dollar-saving minerals received prior attention. Water shortages throughout the system at certain periods severely hampered operation, and the necessity of hauling water tank wagons involved a loss of about 3,500 tons of traffic a week. By arrangement with the boarding schools, holidays have been staggered, reducing by almost 35 per cent. the demand on coaching stock at peak periods. Passenger-coach mileage totalled 13,309,105, giving an average of 170,039 miles per coach-day.

### Great Northern Railway (Ireland)

THE report and accounts of the Great Northern Railway Company (Ireland) show a deficit of £220,971 for the year ended December 31, 1950. This, added to a debit balance of £75,991 brought forward from the previous year, gives a debit balance of £296,962 to be carried forward. The results for 1950 therefore do not allow of any payment of dividends on the guaranteed, preference, or ordinary stocks. Gross railway receipts decreased by £142,620, and expenditure was reduced by £126,147. The total net income of the year decreased by £37,412 and thus amounted to a loss of £105,879. Fixed charges amounted to £22,097 and debenture interest to £92,995.

The general working results of the company for 1948, 1949 and 1950 are given in the following table:—

	1948	1949	1950	Inc. or decr. 1949-50
No. of passengers	7,731,862	7,159,085	6,034,025	1,125,060
Passenger receipts	£1,404,938	£1,270,407	£1,102,023	168,384
Goods tonnage	1,508,826	1,506,604	1,458,735	47,869
Goods revenue	£1,226,638	£1,216,335	£1,221,981	5,646
Railway net receipts	(Dr.) 38,691	(Dr.) 216,013	(Dr.) 232,486	- 16,473
Road	£60,164	£91,248	£74,028	17,220
Hotel	7,865	6,472	4,145	2,327
Miscellaneous net receipts	64,328	49,826	48,434	1,392
Total	93,666	(Dr.) 68,467	(Dr.) 105,879	37,412
Fixed charges	116,120	116,025	115,092	933
Reserve (contingencies)	50,000			
Deficit	72,454	(Dr.) 184,492	(Dr.) 220,971	
Bal. of reserve for war damage contributions, etc.	77,589	100,714		
Total deficit	5,135	(Dr.) 83,778	(Dr.) 220,971	137,193
Debit bal. brought forward from previous year	37,423	(Cr.) 7,787	(Dr.) 75,991	83,778
Debit balance	(Cr.) 42,558	(Dr.) 75,991	(Dr.) 296,962	220,971

The annual general meeting of the company will be held in Dublin on February 23. It will consider the offer for acquisition of the company received from the two Governments, and receive a report on the proposed discontinuance of services in Northern Ireland. It has been stated that there is likely to be a decisive rejection of the offer, judging from the replies on the voting cards so far received from the stockholders.

### Elements of Transportation Economics

IN a manual\* which Professor G. Lloyd Wilson of the University of Pennsylvania has written for students to explain the part that transport plays in the development of industry and commerce, no new economic principles are enunciated. Some of them are based on Adam Smith's dicta that:—

"unless a capital was employed in transporting, either the crude or manufactured produce, from the places where it abounds to those where it is wanted, no more of either could be produced than was necessary for the consumption of the neighbourhood. The capital of the merchant exchanges the surplus produce of one place for that of another, and thus encourages the industry and increases the enjoyments of both."

Professor Lloyd Wilson shows how these principles work in the present-day economy of the United States. Separate chapters deal with the relation of transport to prices, industrial production, agricultural development and marketing. Free use is made of current transport statistics. To illustrate the tendency to concentrate markets, we read that 52 per cent. of the total U.S.A. wholesale trade is done in 14 cities with populations of 500,000 or more. Again we learn that the total investment in transport facilities in the States is probably over \$80,000 million. In 1947 transport agencies of all types earned \$11,382 million, about 5 per cent. of the total national income from all industries.

A curious statement is made about terminal and switching railways. These are said to operate over 2,700 miles of line, "a little over 17 per cent. of the total railroad mileage in the country." As the mileage of Class I railways is 225,000, a percentage of 1.2 would be nearer the mark. The author is inclined to go into too much detail of this kind. His last and longest chapter on railroad organisation has little connection with the theme of the book. The principles of transport economics remain the same, however individual railways are organised. The space given to that question might have been filled more profitably by a review of such matters as the regulation of road, water and air transport, the fixing of the charges raised by these agencies, and the effects of the Federal and State subsidies which they receive. There is an ample literature about U.S.A. railways, but we have few economic studies of other branches of transport in the States, though huge sums are being spent on their development.

### Canadian National Railways

COMPARING the industrial and economic position of Canada today with that in 1939 in a review of the year 1950, the Chairman & President of the Canadian National Railways, Mr. Donald Gordon, considers the position today far better. When Canada entered the war, the railways shouldered a burden much greater than they were prepared for. Years of depression had weakened them; they were short of skilled manpower, equipment, and materials, and as the war progressed some of these shortages became acute. Yet, because they were fundamentally sound and well managed, they were able to do the biggest job of their history.

After the war the railways continued to carry freight in tremendous volume, which was reflected in their gross revenues; however, costs continued to rise. The railways had to ask for compensation to offset increased expenses, but efforts to put themselves on a footing comparable with the rest of industry met with determined opposition. In freight rate increases the relief granted in 1948-49 fell short of requirements. Costs continued to rise and the Canadian National, burdened also by excessive fixed charges due to an unrealistic capital structure, showed a deficit of \$33.5 million in 1948, and of \$42 million in 1949. The situation improved in 1950. Heavier freight traffic and freight rate increases in March and June added to the Canadian National gross revenues for the year. But with the prospect of heavy and immediate expenditure for equipment and maintenance and increased labour and material costs, it would be misleading to assume that the need for some relief from excessive fixed charges was less acute.

Revenue tons moved in 1950, said Mr. Gordon, were 4 per cent. more than in 1949. There were lower loadings in pulpwood, livestock, and grain, the last due largely to the dollar shortage in Britain, which caused deferment of deliveries of wheat. Higher loadings of crude and fuel oil reflected the importance of new oil fields in Western Canada.

Despite efforts to stimulate passenger travel, the railways had to accept a decline in this. Compared with 1949, Canadian National passenger earnings in 1950 will show a decrease of some 10 per cent., attributable partly to the curtailment of services at the beginning of 1950 owing to a fuel shortage, to the work stoppage in August, and to the Manitoba flood. Parcels business was heavy, though earn-

\* "The Elements of Transportation Economics." By G. Lloyd Wilson. New York: Simmons-Boardman Publishing Corporation, 30, Church Street. 7 1/2 in. x 5 in. 178 pp. Price \$2.95

ings reflected interruptions to train service. Hotel revenues declined slightly. Prices of materials and supplies purchased by the railway in 1950 increased on an average by 2.4 per cent. The average cost of rail increased 5.7 per cent. over 1949; of iron and steel products, 4 per cent.; of lumber, 20.3 per cent.; and of locomotive coal, 1.7 per cent. Wage increases to non-operating railway employees under the Maintenance of Railway Operation Act and the recent Supreme Court award will add over \$15 million to the annual payroll, and when applied to all employees on the railway, it will amount to more than \$18 million a year annually.

Dieselisation progressed during the year, when eight 1,500-h.p. diesel locomotives were placed in service on freight trains between Montreal and the Lake St. John area of Quebec, with more efficient and economical handling of heavy traffic over the adverse grades. Eighteen 600-h.p. diesel-electric locomotives were delivered for use on Prince Edward Island, which will be the first province to be completely dieselised. Three electric locomotives were acquired for the Montreal suburban service. On order for delivery in 1951 are 28 road diesel-electric locomotives of 1,500 h.p. and 20 of 1,600; 22 800-h.p. shunting engines and 18 diesel-electric road shunting engines of 1,000 h.p.

During the year there were shortages of all types of freight cars, largely because of increase in car loadings and the backlog of traffic accumulated during the work stoppage. An accelerated shopping and repair programme has returned a substantial number of cars to service and 5,000 steel box cars are now on order for delivery this year. With serious deficiencies of rolling stock, both freight and passenger, shortage of materials and congestion arising out of accelerated defence purchasing mean that deliveries are likely to be very slow. Regarding the improvement of passenger coaches, Mr. Gordon states that a new type of sleeping car with all-enclosed space has proved very popular with the public. Sleeping cars and dining cars are being converted and modernised in the railway's own shops.

Abnormally cold weather on the Pacific Coast, heavy snowslides in the Rockies, and severe conditions in the Prairies at the beginning of the year and the disastrous Red River flood affected operation.

### European Transport Statistics

THE contrast between pre- and post-war inland transport in Europe is brought out by the first of a series of statistics\* recently issued by the Transport Division of the Economic Commission for Europe. Information has been generally confined to the "principal railway system" in each country, which, except in the case of Switzerland, has, in the words of the compilers, "resulted simply in the exclusion of minor lines of local importance." Even if countries are not included such as Greece, which have a large mileage not pertaining to the principal system, it is misleading to omit the secondary railways of Western Germany, for instance, or even France, let alone the Belgian light railways (which last perform many economic functions of a standard railway); the secondary railways in several countries can show respectable aggregate figures. The compilers however claim that freight carried by secondary originates or terminates on major railways, and that the sometimes heavy passenger traffic of minor systems (e.g. London Transport) is "essentially urban"; but where, as for London, much suburban traffic is moved by the "principal system" as well, the failure to incorporate London Transport or the Paris Metro figures is misleading. A complication is the inclusion in certain cases only of "narrow-gauge lines belonging to or operated by the main-line railway systems." The statistics nevertheless scrupulously take note of factors tending to discrepancies between pre- and post-war figures, such as frontier alterations.

The least familiar statistic is that of traffics in relation to the economic activity of 1938; the latter is expressed by

an index figure provided by the United Nations Economic Survey of Europe, 1949, which shows commodity production and imports in terms of 1938 values. Attention is drawn to factors such as transit traffic, which may cause fluctuations in tonnages and have a different relation to internal economic activity. This table is given below:

Index of Railway Traffic and Economic Activity  
(1938 = 100)

Country	Year	Passenger			Freight			Approximate index of production and imports
		Passenger-km.	Passenger-journeys	Average length of journey	Ton-km.	Tons carried	Average length of haul	
Austria*	1948	175	208	84	123	115	107	78
	1949	—	—	—	152	121	125	103
Belgium	1948	113	110	103	111	105	130	107
	1949	114	106	108	102	97	127	107
Denmark	1948	211	187	113	222	185	120	115
	1949	—	185	—	201	153	132	128
France	1948	139	120	116	153	120	128	105
	1949	133	111	121	153	122	125	109
Italy	1948	183	195	94	86	76	118	96
	1949	177	212	83	89	80	113	104
Netherlands	1948	219	219	100	125	127	97	99
	1949	205	204	100	137	136	99	112
Norway	1948	221	191	116	143	99	—	112
	1949	232	183	126	157	114	—	123
Switzerland	1948	204	183	111	122	133	92	—
	1949	202	182	111	104	115	90	—
Turkey	1948	252	236	107	227	194	115	—
	1949	238	232	102	242	200	119	—
Great Britain	1948	106	80	131	141	104	126	109
	1949	—	74	—	143	105	136	115

\* Base year for Austria—1937

Amongst the many causes of the rather unexpected—(given road competition)—rises in passenger traffic the compilers name full employment, paid holidays, changes in employment and in location of industries, shortage of housing (involving longer travel to and from work), electrification, the high cost or scarcity of petrol, and (in some countries) Governmental restriction of road transport development.

No conclusive explanation is given for the increases in freight traffic. Only in one country, Italy, was the index of ton-km. lower than that of production and imports; in four countries, Austria, Denmark, France and the Netherlands, the index of tonnage conveyed was higher than that of economic activity, with an opposite trend in Belgium, Italy, Norway, and Great Britain. The fact that in some countries the increase in rail charges was relatively lower than the increase in commodity prices was, as the compilers rightly point out, one of the causes of increased traffics in relation to production and imports. The increase in average haul was caused in part by the passing of short-haul traffic to the road. In Belgium, the 1948-49 increase in inland water traffic was roughly equal to the fall in tonnage by rail during the same period.

Many other tables are included, covering road, inland water, and certain seaport traffics. Of the remainder of the railway statistics, many will be familiar to readers of the reports of the administrations concerned and of the International Union of Railways. It is however as well to be reminded that, for instance, the process of co-ordination (i.e. replacement by road services of unprofitable branch train services) on the French National Railways (as opposed to independent secondary lines) resulted in the unexpectedly small reduction of only 3 per cent. in mileage in 10 years since 1938. The diagrams showing the total carrying capacities of all forms of transport and similar data covering all such forms are especially useful, and shrewdly commented on. Regarding the railway statistics proper, carefully prepared and annotated as these are, there seems to have been duplication of labour as between the compilers of the Economic Commission for Europe bulletin and the international railway organisations that already exist.

\* Annual Bulletin of Statistics. First Year, 1949. United Nations Publications No. 1950. II. E.2. Obtainable from H.M. Stationery Office. Price 3s. 9d.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### Coach Bogie Design

February 5

SIR,—It appears, from preliminary details so far published and referred to in your December 1, 1950, issue of the new British Railways standard coaching stock, that the bogie design has been based on results of comparative trials of modern coaches of the four former main-line companies.

Although I am loath to criticise before examining the design and sampling the riding qualities; and, realising the value of past experience, it does seem as if the bogie design is yet another example of tradition prevailing over unbiased scientific investigation. In this connection, a study of the latest Swiss practice should be of value.

Other details of Swiss stock appear worthy of imitation such as the accessible and reliable shaft-driven coach lighting dynamo, which is mounted on the outside of the bogie frame.

The problem seems to merit more attention than hitherto given, especially as, on electric units, it is much aggravated by the British love of axle-hung traction motors. Anyone doubting this should travel from Shenfield to Liverpool Street in the rear motor coach of an Eastern Region electric!

Yours faithfully,

J. RODGERS

The Pilgrims Way, Little Baddow, Essex

### Streamliner Success

February 7

SIR,—Lord Garnock's letter in your February 2 issue suggests that revenue statistics disguise the difficulties of passenger train operation in the United States. Are these not emphasised by the fact that passenger revenue was the only general revenue account to show a decrease during the first ten months of 1950 compared with the corresponding period of 1949? The decrease was 7.5 per cent., in spite of higher passenger fares being charged in the eastern states and came on top of a decrease of 10.7 per cent. in 1949 from the 1948 level.

Statistics have not been published of the total amount of revenue earned by streamliners or of the cost of working them. We do know, however, that the railways carried some 7,500,000 fewer passengers in parlour and sleeping cars in 1949 than they did in 1947. That was a drop of 24 per cent. in the class of passengers likely to use streamline trains. So Lord Garnock may overrate the importance of streamliners in the railway economy.

The success of particular trains on routes with a high density of traffic, like Chicago and Twin Cities, does not offset the loss of business in other places. In 1949 the Burlington was down 11 per cent. in passenger revenue from 1948, the Milwaukee 10 per cent. and the Chicago & North Western nearly 15 per cent. For the first 10 months of 1950, the passenger receipts of all three railways were again less than in the same 10 months of 1949. Similarly on the Southern Pacific passenger takings were down nearly 7 per cent. to the end of October, 1950, though the territory it serves was very busy, freight revenue being up 11 per cent.

At present the problem of passenger travel seems to be beating the American railway companies, but Lord Garnock is mistaken in thinking that the Interstate Commerce Commission adds to their troubles. That body has certain powers over abandonment of lines and services. It appears to exercise them with discretion. Since 1939 passenger services have ceased on 14,700 miles of railway. In 1949 alone passenger services were withdrawn from nearly 3,000 route miles. The mileage still operated in passenger service was 157,000, a contrast to the 226,000 miles in freight service.

Impressions about transport are of little value unless they are supported by statistics. Lord Garnock thinks that buses compete more strenuously for traffic in the States than they do here, because they run faster. Actually the volume of bus transport is estimated to have been 16 per cent. less last year, and the only American passenger carriers doing more business were the airlines, which may have an increase of 15 per cent., made possible by the lavish subsidies which they enjoy. Such questions have, however, little bearing on the hard fact that the volume of freight traffic, not streamline success, measures the prosperity of the U.S.A. railways.

Yours faithfully,

R. BELL

Frognaal, N.W.3

### French High-Speed Running

January 22

SIR,—Your issue of December 8, 1950, contained an article on British and French passenger services listing high-speed runs in the various Regions of British Railways and the French National Railways.

As regards the Northern Region of the S.N.C.F., I would like to draw your attention to an error in the particulars of runs at 60 m.p.h. and over. The nine runs total 2,180 km., or 1,355 miles, and not 715 miles as shown. The runs are as follows:—

Paris-Lille (diesel)	..	..	4 runs of 251 km.	= 1,004
Paris-Aulnoye (steam)	..	..	3 " " 230 km.	= 690
Paris-Jeumont (diesel)	..	..	" " 243 km.	= 486
				2,180

Yours faithfully,

FEYEUX,

L'Ingénieur en Chef,

Chef du Service

du Matériel et de la Traction

Société Nationale des Chemins de fer Français,

Région du Nord,

78, Rue des Poissonniers, Paris, 18<sup>e</sup>

### Closing of Branch Lines

February 3

SIR,—The remarks of mine which Mr. H. L. Hawker quotes in his letter in your issue of January 26 relate to my own larger views of integration which are that our system of communications should be regarded as a whole, that is, that railways, roadways, and waterways (as distinct from the vehicles which move over them) should be taken as a whole—as continuous routes.

The traffic to be moved should be manipulated to ensure that the railways are used for full train loads at high speeds between concentration centres fed and tapped by road, the traffic being manipulated in accordance with the basic plan designed to achieve an average train load of 500 tons at an average of 30 m.p.h.—15,000 net ton-miles an hour. Some train loads would be 1,000 tons, some 250, and the speeds between centres could be (but need not be) 15 and 60 m.p.h. respectively and still average 15,000.

The branch-line question then would be: to what extent do the branch lines fit into this plan? A branch terminal might be the most convenient point for a concentration centre, although branch services, local or feeding a main line, would cease.

Mr. Hawker's other questions, I think, are not specially addressed to me, but he does not take sufficient account of the fact that, as routes, the branch lines often do not conform to the flow of local traffic as well as the roads. For example, the road from Oxford to Fairford runs through

towns which are some distance from the railway stations both at Oxford and on the branch. That is a factor common to numerous railway stations, not only those on branches, and it has largely determined the public choice of the bus, car, and coach. Motor services ought to be, and can be, as reliable as railway services within a public service, national or municipal, and I think they have been much improved under the disinterested influence of the Licensing Authorities.

Yours faithfully,  
FREDERICK SMITH

65, Hallowell Road, Northwood

## Freedom of Speech

January 18

SIR,—I have read with interest Dr. Ransome-Wallis's letter of December 27 in which he sets out to damn with faint praise, to be able as he goes along to damn British Railways good and strong. The nine-pin he sets up is the one labelled "Freedom of Speech" about which both Lord Hurcomb and Sir Eustace Missenden have spoken recently. After saying that he thinks there is more in it than was contained in Lord Hurcomb's remarks, he bowls his nine-pin down with a collection of tittle-tattle from this and that man, and concludes with such words as "bureaucracy" and "deadheads."

Let us for a moment look at the other side of the picture. For the last three years an attempt has been made to weld four large groups of railways—I purposely use the word "attempt" because in the vastness of the task it is little more than that at the moment—and it will be some time before the job can be brought to any kind of conclusion.

I have worked on the railways for nearly 50 years and therefore know a little of what Mr. Ransome-Wallis is talking about. Although I would say there is criticism of the Railway Executive by the staff, mainly because it does not always explain to the rank and file the objects it desires to obtain, any person not wholly prejudiced knows that the Executive is up against a great task, not helped by the times in which we are living.

To read Mr. Ransome-Wallis's letter one would think that railwaymen had never groused before 1948, but that only illustrates how amateur is his knowledge of British railways. I can assure you there was quite a deal of it before that date, and there is likely to be quite a lot of it twenty years hence.

Yours faithfully,  
F. C. ROBINSON

83, Gordon Road, E.18

## London Railway Planning

January 20

SIR,—In your issue of October 20 and 27, 1950, you refer to the decision of the London Transport Executive not to proceed at present with the conversion to electric working of the Mill Hill-Edgware, and Finsbury Park to Alexandra Palace and East Finchley lines for through working from the Northern Line tube, nor with electrification from Epping to Ongar.

As part of the programme covers the doubling of single lines, is it possible that, by the introduction of an automatic colour-light signalling system for single-line working, the doubling proposal might be deferred and the conversion brought within present-day economic limits?

Here in New Zealand we have an electrified line from Wellington to Johnsonville, seven miles in length, and single throughout with three intermediate passing loops, and with automatic signalling. A service of trains every twelve minutes in each direction is operated with multiple-unit stock, and with five intermediate stops the journey time is 20 min.

The line is 3 ft. 6 in. gauge, curves of 10 ch. radius are frequent, and four miles are on severe gradient. There are several level crossings. A similar system of automatic

single-line signalling is used on the Vicinal system in Belgium and was described recently in the *Bulletin of the International Railway Congress Association*. It was briefly referred to in your issue of September 29, 1950.

To the north-west, quadrupling of the former G.W.-G.C. joint line to High Wycombe would appear necessary if the service is to expand more. If this could be carried out it could be used also to the relief of the former G.C.-Metropolitan joint line, where quadrupling has been deferred, by diverting Eastern Region main-line trains to Paddington via High Wycombe. Now that the G.W.-G.C. joint line has been transferred to the Western Region some minutes might be saved for London and Birmingham expresses if Ashendon Junction were relaid to give preference to the Bicester line.

Yours faithfully,  
R. G. R. CALVERT

84, Manners Street, Wellington, N.Z.

## Mr. S. M. Khurshid's Appreciation

February 9

SIR,—During the last four months which I have spent in this country studying the public relations and publicity organisations of the British Transport Commission, and its various Executives, particularly the railways and London Transport, it has been my privilege to meet hundreds of railwaymen of all categories and grades, as well as others connected with the transport and advertising business. From everybody I have received uniform courtesy and kindness. They have not only provided me with all facilities in connection with my work, but what I feel was far more important, they made me very welcome in their midst.

I am shortly returning to Pakistan, and as it would be impossible for me to do so individually, I would like to thank them all through the courtesy of *The Railway Gazette* for their co-operation and helpfulness.

Yours sincerely,  
S. M. KHURSHID

Ashley Court Hotel, London, S.W.7

## Railway Efficiency

February 3

SIR,—For the information of Mr. H. W. Warwicker, writing in your February 2 issue, and others who might agree with him on my personal aspirations, may I inform you that any link-up of Barnham would be with my senior neighbours, and would automatically make my position redundant? Since the date of my appointment, my station has been linked—quite rightly, under present conditions—with the only other country station on the branch, but with no effect on my classification.

Any appreciable extension of the linking-up principle would add to the number of high class posts, and lessen the already too few (from the promotion viewpoint) lower grade posts, which I can reasonably hope to secure. The North Eastern Region traffic agents to whom I have referred in this correspondence are mostly special class.

Basically, I have suggested a general upgrading of station-masters, with a possible compensatory reduction in small, "one-man" stations, to attract the right type of man for the job—the man of the type of his naval counterpart, who might introduce to the railways, where efficiency matters most, something of the efficiency of a ship. Such a suggestion, far from being of potential advantage to myself, entails possible hardship.

I happen to be one who wants to see a return of the efficiency I knew when I joined the railway service 22 years ago, and consider Mr. Warwicker's self-implied broadness of vision contradicted by his ability to make unpleasant and untrue accusations.

Yours faithfully,  
PETER COLLINS  
Stationmaster

Station House, Barnham, Norfolk

## THE SCRAP HEAP

### Euston Interlude

Scene: Euston, 6.18 p.m.

Date: Thursday, February 8.

Passenger to Porter altering platform notices opposite the "cattle pen": Why is there no platform number opposite the arrival time of the 6.18 from Northampton?

Porter: We are all disorganised this evening, as most of the trains are running to time!

### Rail Ticket Raid

Railway auditors have had to sort out and check more than 20,000 railway tickets at Alexandra Palace Station on account of a raid by hooligans who took all the tickets from the racks and scattered them on the floor. Ink, water, gum, and the contents of the fire extinguisher had been poured over them.—*From "The Star."*

### L.S.W.R. and the Great Exhibition

A correspondent has sent us a copy of a minute, dated June 1, 1851, of the L. & S.W.R. Commercial Committee, relating to the Great Exhibition of that year. It reads:—

#### ARRANGEMENTS FOR STAFF TO VISIT THE EXHIBITION

The committee respectfully suggest to the board that all persons in the employ of the Co. should be allowed time to visit the Exhibition, if they see fit to do so.

That no reduction be made from their pay for the time they may be permitted by the Heads of the Departments to be absent for this purpose.

That those who do not reside in London be conveyed to and from London to visit the Exhibition free of expense,

their wives and where there are children—one child.

That the Heads of Departments be requested to give every reasonable facility for carrying out this, the wish of the Directors, in such manner as will least interfere with the public traffic, a regular business of the Company.

[The italics are those of our correspondent, who wonders what the other interests of the company were!]

### Talyllyn Railway

The executors of the late owner of the Talyllyn Railway have agreed to transfer the ownership and administration of the company to the Talyllyn Railway Preservation Society, a non-profit-making organisation which has been formed to ensure the continuance of the line. The railway, authorised in 1865, runs from Towyn, Merioneth, to Abergynolwyn, seven miles, is of 2 ft. 3 in. gauge, and still possesses its original locomotives and rolling stock. The Society invites railway enthusiasts to become members. Privileges will include free travel over the line. Full details are obtainable from the Honorary Secretary of the Society, 18, Moorland Court, Melville Road, Edgbaston, Birmingham 16.

### Cheaper Travel to Ireland

Astute travellers on the Euston-Dublin route, through Holyhead, have found a way to save 8s. 4d. on each trip, at the expense of British Railways.

Inclusive return fare from Euston to Dublin—third class rail and saloon on steamer—is £6 15s.

But some travellers take three separate tickets: Euston to Holyhead (£3 11s 6d. return); saloon steamer

(£2 12s. 6d.); and Dun Laoghaire to Westland Row, Dublin (2s. 8d.). Total £6 5s. 8d.

In the same way, 6s. can be saved on the Liverpool route to Dublin. But travellers who try this method on the London-Belfast route, via Heysham, lose a penny.—*From the "Evening Standard."*

### Three Silent Bells

Where hang three silent bells which might well ring again during Festival year? They are in the clock-tower at Kings Cross Station. They are a tenor, bass, and treble bell, and were thrown in with the clock when the directors of the former Great Northern Railway bought it from the Exhibition of 1851.

Many years have gone by since travellers heard the chimes of Kings Cross. They were re-started in 1924 after the 1914-18 war. By 1927 or thereabouts they were silent again.—*From the "Daily Mail."*

### Segregation

In addition to railway compartments labelled "Non Smokers" and "Ladies only," what about having a few marked "Non Talkers," "Non Whistlers," and "Non Sniffers"?—*From a letter to "The Evening News."*

### Tailpiece

I've never been a porter on the railway.  
A ganger or a shunter or a guard,  
I've never been a driver or a fireman,  
I've never held a railway union card.

I've never stood inside an engine round-house  
Where smoke and red-hot ashes hold  
their sway,  
I've never lit a fire inside a firebox  
To raise steam for an engine's arduous day.

The working of an operating office  
Remains to me a far from open book,  
And right inside the board room of  
directors  
I've never been vouchsafed a single look.

And yet I cannot pass along a lineside  
Where signals indicate approaching  
train,  
Without a feeling that is most ecstatic  
And brings my boyhood back to me  
again.

Perhaps in some now bygone incarnation  
I rode the footplate of historic steed,  
I may have been a driver of the *Rocket*  
And there performed some doughty  
driving deed.

But now, alas, my rail-fan days seem  
numbered  
With trains withdrawn from service  
week by week,  
Unless there's coal to fill up all the  
tenders  
The outlook for my hobby's mighty  
bleak.

R. M.



"This free cocktail is frightful!"

[Reproduced by permission of the proprietors of "Punch"]

## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### CANADA

#### C.P.R. Revenue Losses

The Canadian Pacific Railway lost \$5,881,000 in gross revenue because of the general railway strike last August. Mr. George F. Buckingham, General Traffic Manager, gave this estimate to the Board of Transport Commissioners at the opening hearing on the application by the railway for a general freight-rate increase of 5 per cent.

He estimated the lost revenues as: freight, \$4,562,000; express, \$111,000; sleeping and dining car and miscellaneous, \$337,000; mail \$95,000. Total freight revenues during the nine-day strike would have been \$9,124,000, but half of this had been recovered before and after the strike.

### UNITED STATES

#### Strike Ending

By the end of last week thousands of railwaymen on strike for a 40-hr. week were returning to work in the face of a "return or be dismissed" ultimatum by the Army, which has legally controlled the railways since the strike last August. The Army has put into effect provisional wage increases, pending a final settlement between railway managements and unions on wages and working conditions.

#### Record Wagon Orders

Orders during December for 3,326 new freight wagons brought the 1950 total to 156,481, the American Railway Car Institute and the Association of American Railroads have announced jointly. This is the largest number of

new freight wagons ordered by the U.S.A. railways in any year since 1922.

A total of 5,700 new wagons was delivered during December, compared with 5,791 in November and 3,300 in December, 1949. Deliveries for the full year 1950 were 43,991. Deliveries are expected to increase gradually during the first quarter of 1951 and may reach the 10,000 monthly level by April or May.

### SOUTH AFRICA

#### Road Motor Services

The efficiency of the road motor services has been considerably increased during the past year by placing heavier vehicles in service, by reducing the mileage operated, and by reorganising services which were in excess of the requirements of the public. There was nevertheless a loss for the period April-September of £110,325, which was £30,534 more than in the corresponding period of the previous year.

Revenue increased by more than £130,000, but expenditure was £161,000 higher. Among the unfavourable factors were an increase in fuel costs, and increases in the amount of depreciation and interest charges owing to the high capital cost of vehicles and higher cost of tyres.

Non-paying services are constantly being withdrawn and the administration has made appeals to the public to make the maximum use of the road services, as without adequate support they cannot be maintained. Bus services for native passengers, which used to be operated from the native township of Orlando, near Johannesburg, have been transferred to a private company

operated by Africans. In taking this step the railway administration gave effect to the policy that natives themselves should undertake transport services for their own people in predominantly African residential areas.

### ITALY

#### Cinema Coaches

Some of the principal main-line trains of the State Railways are to include cinema coaches this year. The new coaches differ little from standard modern stock in outward appearance. The auditorium is flanked by a side corridor, will contain 80 seats, and will be air-conditioned, with sides and partitions specially proofed against noise and vibration. A small supplement will be charged for admission.

For safety and technical reasons, films exhibited will be 16 mm. The law forbidding reduction of 35-mm. films to 16 mm. within six months of release has been modified in the case of railway cinema coaches. Recent experience with 16-mm films shows that projection need not be inferior to that of 35-mm. films.

### SWITZERLAND

#### Special Vehicles for Parties

Noting the tendency of party travel organisers to prefer rail travel when special rolling stock was available answering their requirements, the Federal Railways before the war placed in service seven "Red Arrow" electric and also other railcars. These have now proved insufficient for traffic. New railcars to be built for party traffic will be capable of high speeds and will incorporate fluorescent lighting, buffet facilities, and loudspeakers for music, travel commentaries and announcements generally.

### WESTERN GERMANY

#### Track without Joints

The Federal Railways are experimenting with a new type of sleeper strong enough to resist the stresses from fluctuations in temperature, which would therefore almost obviate the need for rail joints.

The sleepers consist of concrete blocks, in which two wires of special steel are embedded under a tension of 26 tons. These wires are expected not only to provide the necessary mechanical strength but also act as better heat conductors than wooden sleepers. It is also expected that the higher price of these sleepers will be balanced by their longer life.

After long experiments an experimental section  $4\frac{1}{2}$  miles long on the main line between Munich and Salzburg has been laid with these sleepers. A similar length has also been installed at Treysa, on the Kassel-Frankfurt main line. The replacement of the ex-

### South African Marshalling Yard



Part of the yard at Germiston, South African Railways, where more than 1,250,000 tons of goods are handled monthly

isting permanent way was carried out by means of special equipment, at a rate of over half-a-mile a day.

### German Lines in Switzerland

Negotiations have taken place between the German Federal and Swiss Federal Railways on the operation of German lines in Swiss territory, as it was felt that the agreement concluded after the war was obsolete. The problem concerns chiefly the German main line between Singen and Basle, which traverses the Swiss enclave around Schaffhausen. On the 12-mile section between Singen and Schaffhausen there are four frontier stations. At Schaffhausen, the German section of the station is fenced off from the Swiss.

The German Federal Railways passenger station at Basle, known as the Badischer Bahnhof (being the station of the former Baden State Railway) is situated in Swiss territory, though passengers alighting from or joining German Federal trains are subjected to frontier formalities. It is linked with the Swiss Federal Railways by a short connecting line, with a bridge over the Rhine; this line is used by many international goods and passenger trains.

The Badischer Bahnhof is the terminus of the main line from Karlsruhe.

There is also a main line of the Swiss Federal Railways crossing German territory on the way from Zurich to Schaffhausen, 30 miles. From the south the line enters German territory north of Rafz, and re-enters Swiss territory six miles further on. Only a few trains serve the stations in German territory. This line was of great international importance before the war, when it was part of the main route from Berlin via Würzburg, Stuttgart, Singen, and Schaffhausen to Zurich and to Italy via the St. Gotthard.

## DENMARK

### Rolling Stock Deliveries

Last year the State Railways received from Scandia of Randers (carriages and wagons) and from Frichs of Aarhus (locomotives) the following new rolling stock: 13 steam shunting locomotives; 6 express passenger locomotives; 13 electric motor coaches for Copenhagen suburban services; 4 first class and 8 first and "common" class steel coaches; 12 "common" class steel coaches, of which six have two compartments each

for women with small children; 12 combined bogie postal and luggage vans; 186 covered wagons (17 tons); 270 open wagons (20 tons); 30 open bogie wagons (40 tons); and 22 steel bodies for bogie coaches to be mounted on existing bogies.

### Special Accommodation for Babies

The State Railways recently introduced compartments with a special "rack" for babies underneath the baggage rack. In addition, toilet arrangements include provision for changing napkins *en route*; a table is provided for washing, also hot water, and facilities for drying linen.

## NORWAY

### Oslo-Stockholm Connection

Electrification in June of the Lilleström-Charlottenberg section of the Norwegian State Railways will result in electrification throughout of the main line between Oslo and Stockholm; the Swedish State Railways section east of Charlottenberg, on the frontier, was electrified some years ago. Through services between the capitals will be much accelerated, with a gain of about an hour in the case of the night trains.

## Publications Received

*Britain: Information and Events 1951.* Issued by the British Travel & Holidays Association, St. James's Street, London, S.W.1. No price stated.—This booklet does not claim to embrace every event of importance taking place; but events are included which may seem relatively unimportant, for it is the Association's experience that items of apparently parochial interest do in fact appeal to individual visitors from overseas. There have been cases of visitors travelling thousands of miles to attend some small event in a village with which, perhaps, they have kinship ties. Miscellaneous information also is supplied.

*United States Railroad Map.* By Edward L. Ullman. New York, U.S.A. Simmons-Boardman Publishing Company, 30, Church Street. Price \$2.50.—This is an exceptionally informative and comprehensive map brought out by the publishers of our American contemporary, *Railway Age*, and showing all the lines in the United States. It indicates not only the ownership of each section, but also whether it is single, double, or multiple track, or equipped with C.T.C. or automatic signalling. It is an achievement to have embodied all this information on a single sheet which is not at the same time awkward to handle.

*Appointments in H.M. Colonial Service.* London, H.M. Stationery Office. Price 2s. net.—Railway appointments, though not dealt with separately as such, are mentioned in this publication as they occur under the Colonial Audit and Colonial Engineering (civil, mechanical,

and telecommunication engineer appointments) Services, and under appointments dealt with by the Crown Agents; this last group includes accountant, clerical, draughtsman, marine, permanent way inspector, storekeeper, and traffic appointments. Vacancies occur mostly in East and West Africa and in Malaya. The pamphlet includes much useful general information, a list of recommended books, and an analysis showing the scale of recruitment during the period 1939-49.

*Alloy Steels Containing Lead.*—A brochure has been issued by the United Steel Companies Limited, Sheffield, and prepared on behalf of its subsidiary firm Samuel Fox & Co. Ltd., dealing with the production of alloy steels with the addition of lead. Much useful and interesting data is included of interest to purchasers of this product. Subjects dealt with include heat treatment; mechanical properties, machining characteristics, and so on. Also included are records of machine production and a bibliography of publications on lead-bearing steels.

*Sweden.* By N. S. Roberts, Counsellor (Commercial) to H.M. Embassy, Stockholm. Overseas Economic Surveys. London: H.M. Stationery Office. 143 pp. 9½ in. + 6 in. Paper covers. Price 3s. 6d.—The main interest in this admirably concise and lucid Board of Trade survey of economic and commercial conditions in Sweden is in the author's remarks on Sweden as a market for British exporters, particularly of machinery, including electrical equipment; regarding the latter he draws attention to the necessity for conform-

ing with Swedish practice, and to the recrudescence of German competition. He has also some sound advice for British exporters generally. The Swedish railway material and equipment building industry is dealt with briefly. The short description of railways in the chapter on transport, though clear and accurate, is confined to the State Railways, with virtually no mention of the considerable privately-owned lines still extant.

### Sound Distribution and Amplification.

—An illustrated leaflet relating to A.T.M. sound distribution and amplification has been issued by Communication Systems Limited, 8, Arundel Street, London, W.C.2, a subsidiary of the Automatic Telephone & Electric Co. Ltd. This system has a wide field of industrial application, including factory and office buildings, railway marshalling yards, and fire warning.

*Protection Against Corrosion.*—The use of stainless steel as a protection against corrosion forms the subject matter of the latest publication "Enchivdion" issued by Firth-Vickers Stainless Steels Limited, Staybrite Works, Sheffield, 9. The brochure, which is illustrated, depicts the uses of the various types of Staybrite steels which includes fittings for commercial and other vehicles, locomotive boiler tubes and chemical plant. Also dealt with are creep-resisting steels for use in gas turbines and electric power generation. Included in the brochure is a list of the firm's recent publications relating to mechanical and physical properties of stainless and Staybrite steels, light and precision castings in corrosion and heat-resisting steels.

## Beyer-Garratt Locomotives for the Antofagasta (Chili) & Bolivia Railway

*A powerful metre-gauge articulated locomotive with a 14½ ton axleload and a tractive effort of 55,190 lb. at 85 per cent. b.p.*

THE Antofagasta (Chili) & Bolivia Railway is one of the most remarkable railway systems in the world, and little has been written of the history and development of the feat of British engineering in overcoming the exacting conditions of building a railway through and over the Andes. A study of the profile on page 180 will give some idea of the magnitude of the project. This railway has contributed substantially to the fortunes of both Chile and Bolivia and is of great importance internationally in that very large ton-nages of tin and copper are transported over its lines each year.

In 1873 the first section of the line, laid to 2 ft. 6 in. gauge, was built from Antofagasta to Salar del Carmen, 35 km., to serve the first workings of the nitrate deposits. By 1888 the line had reached Ascotan (km. 366) near the Bolivian border and after negotiations on concessions with the Bolivian Government it was extended to Uyuni and in 1892 had reached Oruro (km. 930).

### Development of Railway

Working arrangements with the Bolivia Railway Company, whereby the Antofagasta (Chili) & Bolivia Railway Co. Ltd. undertook the operation and the construction work of that company were entered into in 1908, and as the lines in Bolivia were constructed to metre gauge it became necessary to change the original 2 ft. 6 in. gauge Antofagasta (Chili) Railway to metre. Before conversion a bogie-changing apparatus was installed at Uyuni to avoid transshipment. The Uyuni-Oruro section was converted to metre gauge in 1916, but the decision to convert the whole line to metre gauge was held up by the first world war. In 1926 the conversion was undertaken to a carefully-devised plan, and track and rolling stock were converted piecemeal with the existing maintenance facilities until June, 1928, when the section Calama-Uyuni, 378 km., was closed for five days for the conversion to be completed.

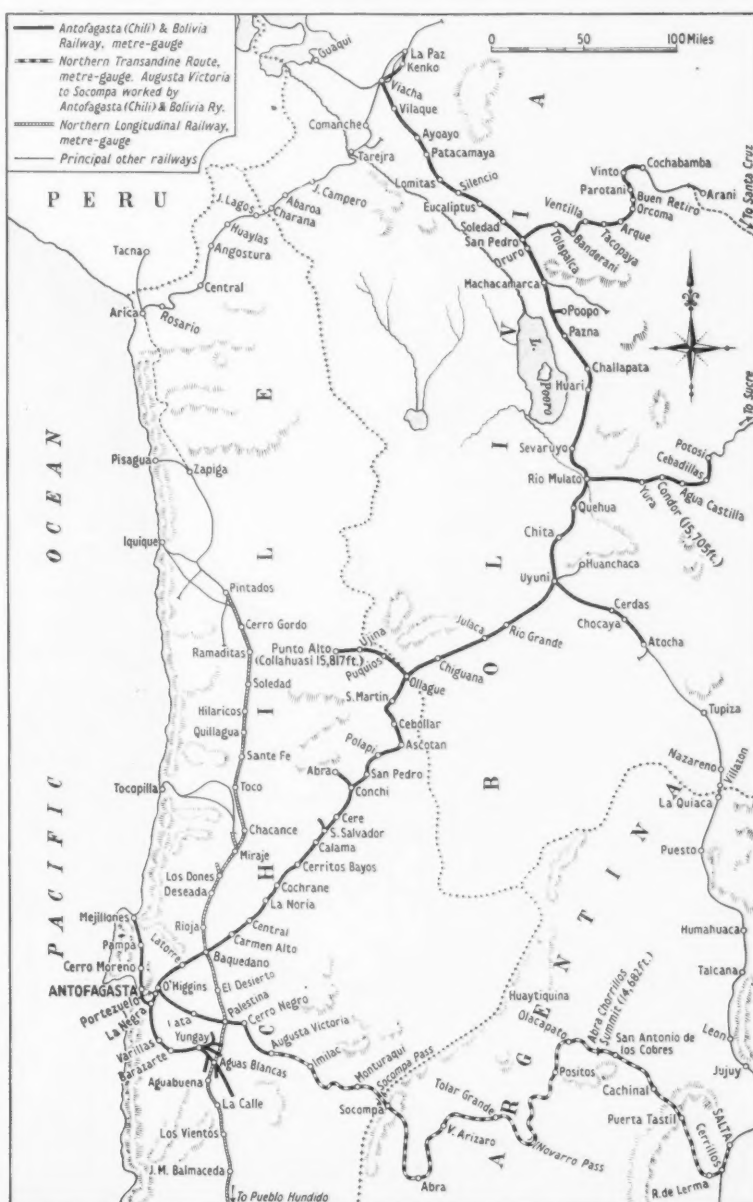
Since that time the railway has met the demands of both countries. It has taken over the operation of the Chilean Northern Railway, the Potosi and Cochabamba branches, and the supply of fresh water by pipe line from the Andes to Antofagasta, approximately 200 miles. The railway was originally laid with 65-lb. rail, but 75-lb. is now standard, of which a considerable mileage has already been laid. Curves are of a minimum radius of 76 metres and the maximum gradient is 1 in 33. The super-elevation is as much as 5 in. and the maximum widening to gauge 32 mm. The line is well-ballasted and the rocky country lends itself to stable

track conditions, although trouble is caused on occasions by washaways and blown sand.

In 1948 the connection between Antofagasta and the Argentine Railways was made by the completion of the line across the Chilean border through the Socompa Pass. This new line is the Northern Transandine and runs for 560 miles from Salta to Antofagasta with grades of 1 in 40. The main line across

Bolivia from Atocha to La Paz forms an important link in the diagonal route from Buenos Aires to Peru.

The chief difficulty confronting the Antofagasta (Chili) & Bolivia Railway from the point of view of train operation has been the Cochabamba and Potosi branches and the severe climb from the coastal plain at Antofagasta to Baquedano and on through Ascotan (13,000 ft.) to Ollagüe to reach the high



The Antofagasta (Chili) & Bolivia, and connecting railways

Bolivian tableland. The Potosi branch is most severe, although considerable realignment has been carried out in the last few years. On this line the railway passes through Condor which, at 15,705 ft. is described as the highest metre-gauge railway station in the world.

To work trains successfully under such difficult track conditions, the railway decided as early as 1913 to use articulated locomotives. In that year it ordered from Beyer, Peacock & Co. Ltd. a number of the Kitson-Meyer type of articulated locomotives. In 1928, it obtained, again from the same firm, three 4-8-2 + 2-8-4 Beyer-Garratt locomotives of outstanding power for the metre gauge on a maximum axle-load of 13 tons which still rank among the largest metre-gauge locomotives in the world.

These locomotives have been used on both the difficult Bolivian sections and have been augmented in recent years by other Beyer-Garratt locomotives on loan from the Argentine State Railways. In view of the satisfactory service of these engines the company decided to order a further six, which have now been completed. They are being re-erected at Mejillones near Antofagasta.

#### General Design

With the general improvement in track conditions a maximum axleload of 15 tons has been allowed for the whole railway, and it was decided that the new locomotives, although following closely the early design, should be fully modernised and built to an axleload of 14.5 tons. Although the early prototype has proved successful, there are many important improvements which have been introduced as a result of the maker's experience. Other alterations have been made in collaboration with the railway, including increases in fuel and water supplies.

For economical production, the original general dimensions have been maintained. Important features which have received attention in the new locomotives have been the inclusion of the new Beyer Peacock patent pivot centres, the adoption of the Hadfield power

reverse gear, redesign of the bogie and inner trucks, and, as shown in the illustrations, the replacement of the feed pump by an exhaust injector.

The chassis has been strengthened in accordance with the latest practice. The locomotives have been built to the requirements of the Chief Mechanical Engineer of the Bolivian section, Mr. R. A. Payne, in consultation with the consulting engineers, Messrs. Livesey & Henderson. The present Beyer-Garratt locomotives have worked the Potosi branch, where they hauled loads of 424 tons, and in recent years these engines have been used on the Cochabamba branch operating all trains between Buen Retiro and Banderani. The six new engines will supplement the existing working on these sections.

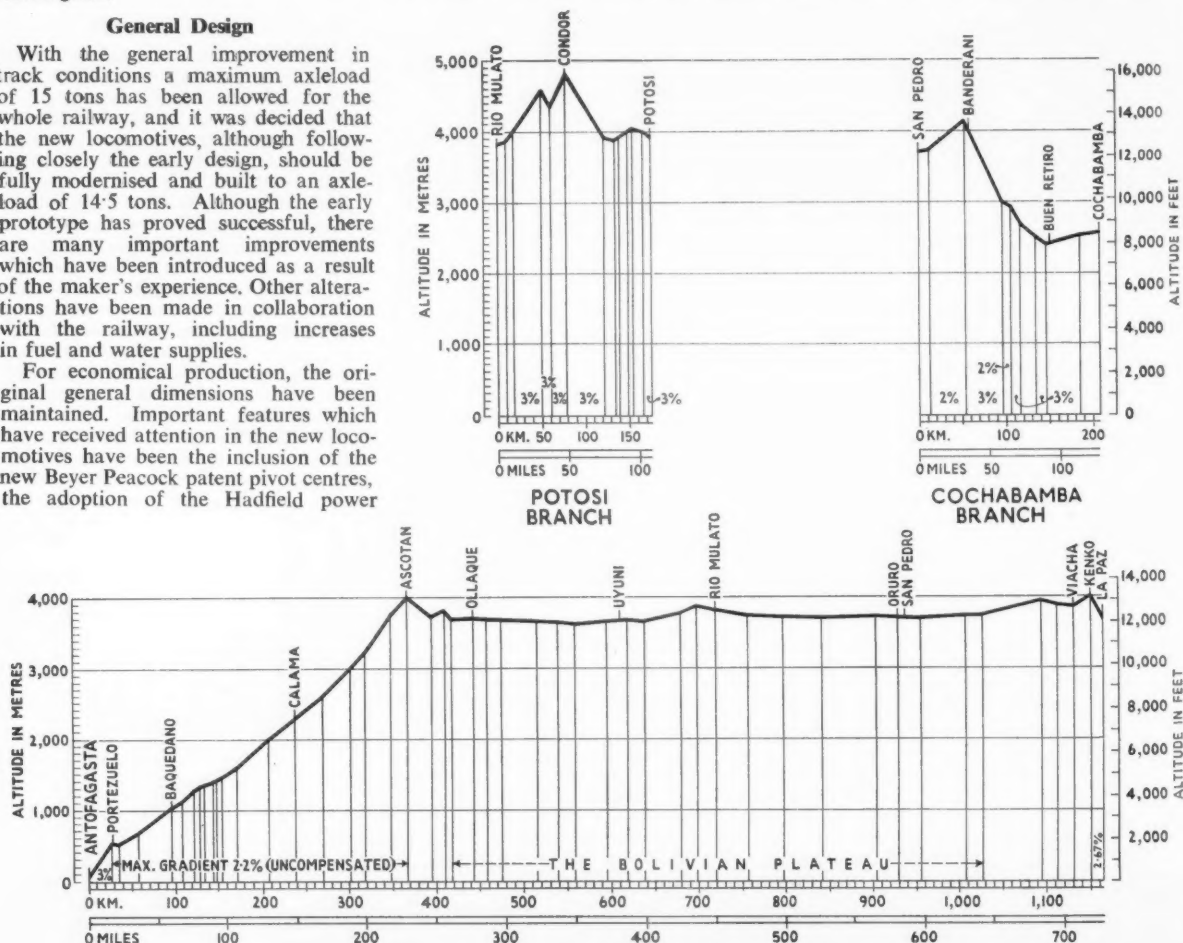
#### The Boiler

The boiler is of considerable proportions for a metre-gauge locomotive, with a total heating surface of 3,410 sq. ft. It is a straightforward design with a Belpaire steel firebox of welded construction; the foundation ring is steel fabricated by electric welding and machined on the surfaces in contact with the plates. The crown has two double

rows of flexible roof stays, and Long-strand steel stays are used for the water spaces. The 275 1/4 in. outside dia. small tubes and the 45 5/8 in. outside dia. flue tubes are expanded into the smokebox tube plate and beaded over and welded at the firebox tube plate after the fitting of copper sleeves.

The superheater, supplied by the Superheater Co. Ltd., has 45 elements and the regulator is of the multiple-valve type. Particular attention has been given to easy access of washout of the boiler; there are eight washout doors, four on each side in the firebox shell above the inner firebox, tapered plugs in the back plate and the smokebox tube plate with mudhole doors on all four corners of the firebox above the foundation ring.

Additional tapered plugs have also been introduced by the firehole and on the radius of the backplate. The two blowdown valves operated from the cab are on the throat plate above the foundation ring. The Weir feed pump used on the prototype has been displaced and the engines are now provided with one Davies & Metcalfe Friedman type of live-steam injector on the right-hand side and one Davies & Met-



Gradient profile of the Antofagasta-La Paz main line

calle type J exhaust injector on the left-hand side.

The injectors have been placed as low as possible for the heavy grade work, to avoid flying off when the water is low in the tanks. As in the previous engines, a steel plate steam collector box is fitted in the dome, and an outside steam pipe controlled by a Hopkinson Ferranti steam valve carries steam to the regulator which is incorporated in the header.

The smokebox is of straightforward design, and a simple copper pipe blower ring is clipped to the blast pipe. The exhaust pipe and steam pipe elbows in the smokebox are now steel castings. The steel plate chimney has a polished copper top.

#### Oil-burning Equipment

Oil-burning apparatus in accordance with the railway company's standard is again provided with a deep tapered form

schaerts valve gear has been designed to give a valve travel of  $4\frac{1}{2}$  in. with a cut-off of 80 per cent. in full gear. Simple and effective operation of the gear is ensured by the inclusion of the Hadfield power reverse gear which provides positive selection and locking.

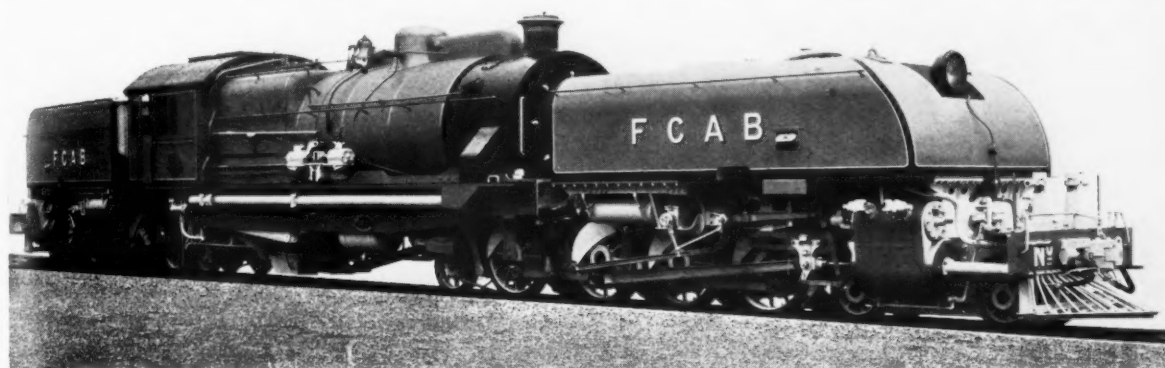
The underslung Laird type of crosshead keeps the sliding surfaces of the main bars as far as possible away from the track and consequent dust and grit. The crosshead slippers are white metalled in accordance with the railway's usual practice. The connecting and coupling rods are forged from class C steel but contrary to the original design, the coupling rods are now of plain rectangular section. The connecting rods are fluted. The large ends have also been redesigned for solid ends. All rods have the railway's special design of spring-loaded oil cap and spindle oil-feed adjustment.

creased capacity. The original engines carried 1,670 gal. of oil and 5,000 gal. of water, whereas this new design accommodates 2,200 gal. of oil and 5,500 gal. of water. The front and hind drawgear consists of Henricot IXM6 type automatic shank coupler with  $4\frac{1}{2}$  in. x  $3\frac{1}{2}$  in. shank. Spencer Moulton No. 726 rubber springs with dividing steel plates are included to withstand buffing and traction shocks.

#### Bogies and Brake Gear

The leading bogie has been redesigned and is of the centre bearing type with three-pin swing links but no spring side control. The trailing truck has also been redesigned, with the modifications to the main frames to permit a total side play of 5 in.

The inner bogie axleboxes have been redesigned to incorporate rocking bearings with ample flanges to take the end



*Semi-oblique view of new metre-gauge 4-8-2+2-8-4 locomotive for the Antofagasta (Chili) & Bolivia Railway*

of flame pan. The operating gear has been improved for the side and bottom air doors which are controlled from the fireman's side of the cab. Each door can be worked independently. The side air doors are set low to admit air below the atomiser jet. The petroleum tank has a capacity of 2,200 gal. fitted with an oil heating coil. A burner steam pipe pressure gauge has been included.

#### The Engine Units

The engine unit frames are of the bar type, with improved staying and a particularly robust arrangement of the pivot centre castings. The pivots are of the Beyer Peacock patent self-adjusting type with mechanical lubrication, and spring-loaded side bearers are provided. The cylinders in close-grain cast iron are cast solid with the half frame stay. The piston heads are of cast steel and carry three cast-iron rings and have tail rods. The piston valves are 10 in. dia. with ordinary type by-pass valves on the steam chest.

The piston rods are fitted with U.K. metallic packing but the valve spindle guides, which are cast solid with the steam-chest covers, have long sleeve packings without stuffing boxes. A straightforward arrangement of Wal-

The cast-steel coupled axleboxes are fitted with bearings of Stone's patent bronze with railway white bronze "C" quality anti-friction pockets. The axlebox keeps can be withdrawn for repacking without dropping the wheels. All hub faces and horn flanges on the axlebox have been enlarged on the new engines to meet the heavy end-thrust on the severe curvature. Horn shoes and wedges are of mild-steel case hardened.

The main laminated bearing springs are overhung and compensation is arranged with the inner truck, inner coupled and driving wheels, in one group and the intermediate and outer coupled wheels in another. The cast-steel coupled wheel centres are fitted with tyres of 56-62 ton tensile steel fastened by screws. The outer coupled wheels have flangeless tyres of  $6\frac{1}{2}$  in. width. The ball joints and expansion joints are in accordance with Beyer, Peacock's latest practice. All pipes are carried above the axles. The expansion joints have been particularly improved by the provision of self-lubricating packing and true alignment is ensured by a ground stainless-steel sleeve welded to the end of the pipe.

The tanks and bunker have been redesigned on the new engines with in-

thrust. The truck radius arm has been lengthened. All bogie and truck tyres have the Gibson ring fastening.

For such difficult operating conditions and working at the high altitudes, the brake has received special attention. The engines are fitted with the latest type of Westinghouse air brake and the original two single side compressors have been replaced by a cross compound compressor mounted at the left-hand side of the smokebox. The driver is provided with one automatic and one straight air brake valve, with the addition of a relief valve for easy control on the long grades. In addition, the engines have a powerful handbrake operating on the hind unit; this handbrake is controlled by pillar and screw at the back of the cab, out-of-line movement being taken care of by sliding cover plates.

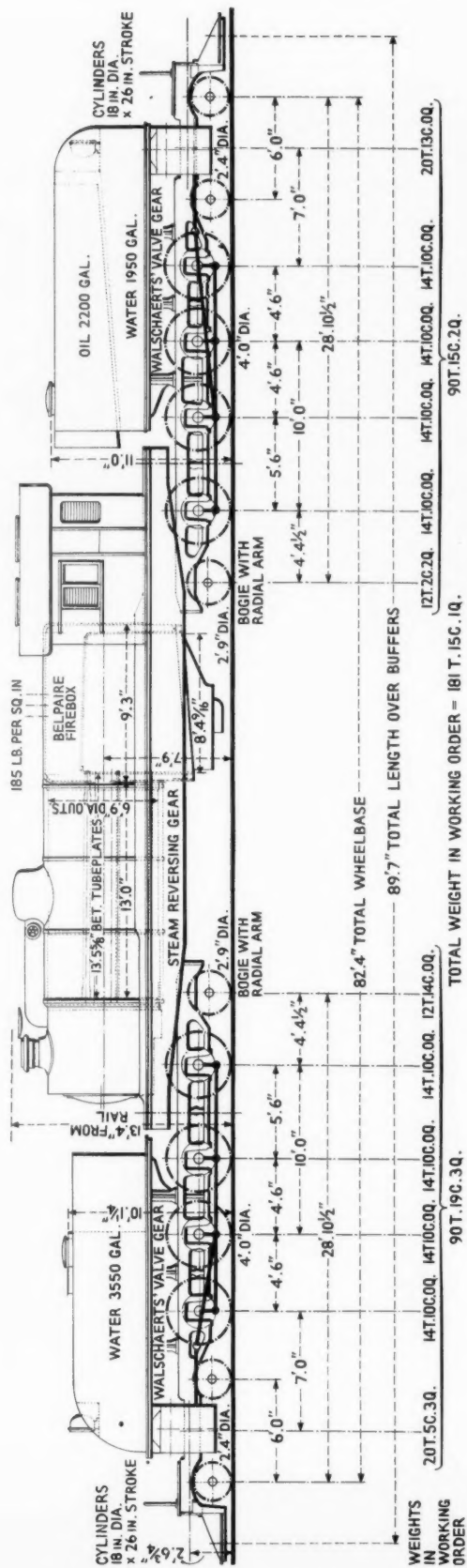
#### Cab and Mountings

The cab is notable for its spaciousness, and the floor is free of obstruction. The upholstered spring-loaded seats and foot rests are comfortable and neat, and the driver has all controls easily accessible, the regulator, steam-reversing gear and brake controls being particularly well sited. The provision

# Beyer-Garratt Locomotives for the Antofagasta (Chili) & Bolivia Railway



*One of the 4-8-2+2-8-4 locomotives recently completed by Beyer, Peacock & Co. Ltd.*



*Diagram showing principal weights and dimensions*

of two angle pressure gauges ensures that both the driver and the fireman can watch the gauge from their positions. The oil pump for the steam reversing gear cataract cylinder is under the driver's seat.

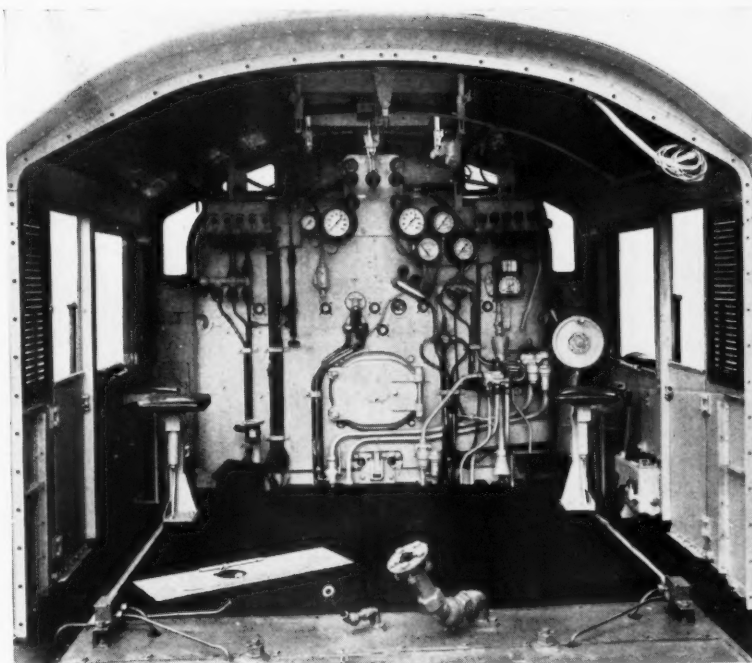
#### Boiler Equipment

The boiler is provided with three 3in. Ross Pop safety valves and also a distinctive feature in front of them is a "Vi-loco" steam operated bell, a warning device compulsory on this railway. In accordance with local boiler regulations, the boiler is equipped on the right-hand side with test cocks at three levels, and on the left-hand side is a long single water gauge.

Wherever possible, controls are fitted with hand wheels of non-conductive material. The cab is fully lined, both on the roof and sides, with hard wood as an insulation against extremes of climate. The cab side windows have double louvres giving full opening or, alternatively, the greatest protection against rough weather. An ample two-way ventilator is placed in the roof of the cab.

A Teloc speed indicator and recorder is included in clear view of the driver. Electric light is supplied by Stone's turbo-generator with electric head lamps on the front and back tanks and the usual cab fittings for water gauge, pressure gauges, lubricators and close illumination of the reversing sector. Wakefield's mechanical lubricators provide lubrication for all engine axleboxes, pivot centres and steam ball joints, although the axleboxes have an emergency oiling arrangement which can be used should the need arise.

The mechanical lubrication to the axleboxes includes feeds to the hub faces of the inner truck axleboxes. The whole equipment on each engine unit comprises a 16-feed Wakefield No. 72 mechanical lubricator plus 4-feed. The cylinders, the valve chests and Westinghouse pump are lubricated by the two Wakefield Eureka "N" hydrostatic 5-feed lubricators, one on each side of



View of the spacious cab

the cab; one feed is carried to each steam chest, one to each cylinder barrel and one to the Westinghouse pump, the surplus feed in the right-hand lubricator being blanked.

Compressed air sanding feeds are at the outer ends of the coupled wheel groups. The large capacity sand boxes are incorporated in the tanks with deflector plate to ensure that sand does not fall on to the motion during filling. Ample tool boxes are included with complete sets of tools, and four 25-ton traversing jacks are fastened to the front and back platforms. All controls are marked in Spanish and the tanks bear the initials of the railway company. The livery is black with red linings; buffer beams are picked out in vermilion.

#### The leading dimensions are:—

Cylinders (4), dia. x stroke ...	18 in. x 26 in.
Coupled wheels ...	4 ft.
Wheelbase, rigid ...	10 ft.
Axleload ...	14.5 tons
Adhesive weight ...	116 tons
Total weight (in working order) ...	182 tons
Boiler pressure ...	185 lb. per sq. in.
Heating surface:—	
Tubes—45 flue tubes, 5½ in. o.d.; 275 small tubes, 1½ in. o.d. ...	2,647 sq. ft.
Firebox ...	217 sq. ft.
Total evaporative ...	2,864 sq. ft.
Superheater, 1½ in. o.d. tubes ...	546 sq. ft.
Total ...	3,410 sq. ft.
Grate area ...	54.9 sq. ft.
Tractive effort at 85 per cent. boiler pressure ...	55,190 lb.
Tractive effort at 75 per cent. boiler pressure ...	48,700 lb.
Oil capacity ...	2,200 gal.
Water capacity ...	5,500 gal.

The engine numbers are 393-398.

**LEYLAND CHASSIS FOR FINLAND.**—Orders from Finland valued at £150,000 have been placed with Leyland Motors Limited following the recent Anglo-Finnish currency agreements. The orders cover 88 bus and truck chassis in addition to a number of separate diesel engines. This quantity of chassis is more than half the total placed abroad by Finland last year. The chassis and units will be imported by Autoliike Teho.

**TRAVEL FACILITIES FOR OVERSEAS BUYERS** TO B.I.F.—Travel facilities of interest to overseas buyers visiting the British Industries Fair to be held in London and Birmingham from April 30 to May 11 include reduced charges on British railways under the Travel Unit Scheme and special trains from Euston to Birmingham section of the Fair. The Travel Unit Scheme, available within the United Kingdom for journeys totalling 1,000 miles or more, allows overseas visitors to pay in their own currency in advance and to obtain a reduction of approximately 25 per cent. on the normal

single fare. Books of travel units may be purchased from agents and offices of British Railways abroad. Applications for refunds in respect of unused travel units must be made to the office where the tickets were purchased. The Ulster Transport Authority, British & Irish Steam Packet Co. Ltd., Belfast Steamship Co. Ltd., and Burns & Laird Lines Limited, have entered into the scheme as far as journeys between Irish ports and Great Britain are concerned.

**PUNCTUAL HANDLING OF PERISHABLE TRAFFIC.**—The result of an effort by British Railways, Eastern Region, staff in the summer of 1950 was a high degree of punctuality in the transport of 55,000 wagon loads of fruit, flowers, vegetables, and similar traffic by special services operated from June to September. About half the wagons contained highly perishable market produce, despatched from stations in the Terrington, Wisbech, and St. Ives areas. Two main flows of traffic were involved, centred on Whitemoor and Peter-

borough respectively, during a concentrated evening period for segregation and despatch by special through services to destinations as far distant as Glasgow, Hull, Leeds and Manchester. Careful planning resulted in 2,296 trains (30 a day) being run to other divisions of the Region or to other Regions with an average of only 3.8 min. delay at the exchange point. Whitemoor Marshalling Yard despatched 90 per cent. of the trains on time during the period with an overall late start not exceeding 1.5 min. per train.

**LOUDSPEAKERS IN STATION REFRESHMENT ROOMS.**—The Railway Executive and the Hotels Executive announce that loudspeakers, connected to the station broadcasting systems, are to be installed experimentally in the refreshment rooms at Edinburgh Waverley, Crewe, Preston, Swindon, and Bristol stations. The object is to ascertain whether train announcements can be broadcast to refreshment rooms without causing too much disturbance to passengers taking meals.

## Unusual Station Architecture, Netherlands Railways

*An example of the architectural possibilities of concrete finish for all-reinforced concrete structures*

**D**UE to the post-war shortage of other materials, the new station building at Enschede, Netherlands Railways, was built entirely in reinforced concrete. Instead of concealing this fact, however, Mr. H. J. Schelling, Architect to the Netherlands Railways, decided to exploit the aesthetic possibilities of concrete architecture. To obtain the best results, an abnormally high standard of materials and workmanship, as well as variety in colouring, was essential in the mouldings and other features, and this was secured largely by prefabrication in

was added for the various parts to obtain shading effects and also avoid monotony.

The tracks and platforms at Enschede run east and west, a through platform serving international trains and bays accommodating local traffic. The station building abuts on the south side of the through platform, and its main floor is at platform level. It consists of a rectangular main block and a narrow wing continuing eastwards alongside the platform. The principal entrance is in the main block and faces east, or at right angles to the platform. As the forecourt at this point is several feet below rail level, two flights each of five steps extending the full width of the building lead up from it to the entrance.

The main entrance, slightly concave in plan, gives access to the main vestibule serving both arriving and departing passengers. On the right as one enters are the booking and luggage offices and bookstall. On the left is the restaurant, the windows of which face the forecourt. As the latter slopes downwards gradually towards an underbridge 400 yd. to the west of the station building,

its level is here sufficiently low for the floor of the station basement to be flush with it. The basement accommodates the restaurant kitchen and the central heating plant and provides space for the parking of 1,300 bicycles.

Departing passengers leave the vestibule through ticket barriers at the far (west) end leading to the concourse, where they find the bay platforms straight ahead and the through platform on the right. Here there are waiting rooms and the stationmaster's offices. Other offices and cloakrooms are arranged along the through platform.

There is no upper floor to any part of the building, but the vestibule is provided with a clerestory roof to admit more daylight. An ingenious combination of the tall chimney of the central heating plant with a clock tower breaks the roof line. Colonnades are provided along the east and south sides of the main building, to which the east wing is connected by a covered way.

The foregoing details were based on an article in our Dutch contemporary *De Ingenieur*, by the architect, to whom we are indebted for the illustrations.



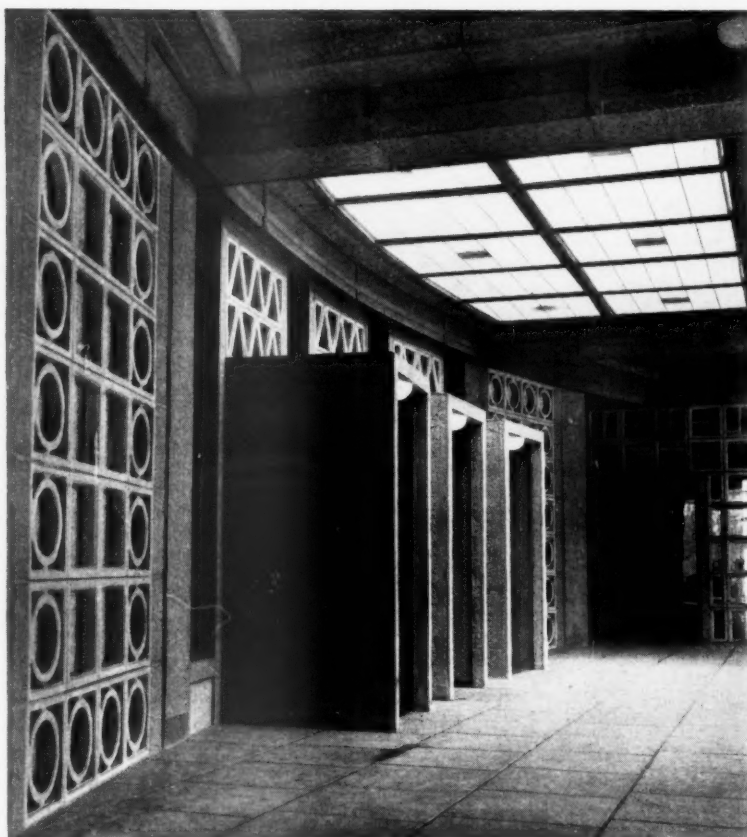
*Combined chimney and clock tower*

workshops. To facilitate the use of prefabrication methods, a standard dimension of 5.25 m. (17 ft. 3 in.) and multiples was adopted wherever possible.

An important feature in the construction of this station was the use of pre-cast slabs and other units as shuttering for such parts as beams and floors cast *in situ*. For instance, one of the principal shuttering units was a reinforced concrete channel 2 ft. 4 in. deep, 2 ft. wide, 5 ft. 9 in. long and 2 in. thick, three of these units being used to cast a standard beam 17 ft. 3 in. in length. Instead of these units being removed after the concrete in the beam had set, their fine workshop finish enabled them to be left in place to sheathe the beams; the joints between the three units form an element of ornamental design.

### Decorative Features in Concrete

Other pre-fabricated concrete units include fluted columns, claustras (or surfacing panels), window and door frames, platform roof girders, steps, and paving slabs. Great care was taken in the choice and use of concrete aggregates, and different colouring matter



*Entrance from street, Enschede Station*

## Unusual Station Architecture, Netherlands Railways



*Hall of new Enschede Station, looking towards platforms, with restaurant on left*



*Terrace of station restaurant at Enschede*

## Bushing Articulated Joints

*Signal and rolling stock equipment*

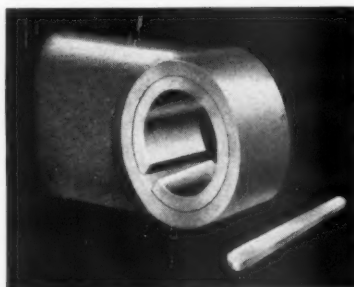
**L**OCOMOTIVE, carriage, and wagon brake and spring gear, with its multiplied-hole and pin joints, provides an appreciable problem for railway maintenance staff, since the inevitable wear must be kept within limits if deterioration of brake efficiency and inequalities in weight distribution are to be avoided. A similar situation arises with signalling equipment, where cranks, compensators, and so on, constitute potential wearing points which by virtue of their multiplicity are an important factor in cost of maintenance and efficient working of the various components.

### Accurate Machining

To provide for such a situation most railways today have adopted the policy of bushing components so that wear is at least confined to a renewable steel bush rather than allowing it to develop on a component part relatively expensive to repair. Such a policy necessitates the accurate machining of bushes to provide the requisite interference fit, and the provision of oversize bushes and pins to suit holes which for various reasons subsequently need enlarging, and, ultimately, the scrapping of components when the maximum hole diameter is exceeded. It also implies the existence of hydraulic or pneumatic presses for fitting and removal, which in turn involves labour in

transportation of components to and from such presses.

This latter point may well prove an important factor in locomotive availability where running sheds are not so equipped, and brake rigging has to be



*Walter split bush and taper key*

sent to shops for rebushing, which point will be fully appreciated by running-shed staff, particularly in the case of overseas railways.

A simplified and economical method of bushing various components using normal hand tools only is claimed for the Walter Patent Hardened Steel Split Bush as manufactured by the Self-Priming Pump & Engineering Co. Ltd., Parliament Mansions, Victoria Street, London, S.W.1.

The split bush is tapped into place and positively locked into position by the application of a tapered key firmly driven home, the protruding ends of the key being finally cut off and the edges left smooth. To remove such a bush when worn is equally simple, and as the Walter bush is case-hardened it ensures utmost resistance to wear even when positive lubrication is absent.

As such a bush does not have to withstand the pressing-in stresses normal to a plain bush, it is not necessary for it to have a wall thickness of more than  $\frac{1}{8}$  in. and therefore for the same size pin a smaller hole in the component is required. Thus if the Walter bush is embodied in new designs opportunity may be taken to reduce the cross-section of the component without reducing strength and so obtain a reduction in material resulting in a lighter component.

Where, however, they are required to replace plain bushes in stock already in service the wall thickness or outside diameter can be increased to meet existing conditions.

In specifying such bushes for new stock the question of standardisation is most adequately dealt with, since future renewals call simply for the replacement of bushes of the original size, and no question of stocks of oversize bushes arises, nor consequent renewal of main components.

**TERMINALS FOR RAILWAY SIGNALLING APPARATUS.**—A new standard (B.S. 442:1950) covering terminals for railway signalling apparatus is a revision of a British Standard first issued in 1932. The standard has been revised to take into account recent developments in design and manufacture, and now applies to main terminals on electrical apparatus for railway signalling, but not to terminals inside the apparatus. It covers the nut type, screw type, and insulated screw type, and materials, dimensions, and manufacturing requirements are specified. Copies may be obtained from the British Standards Institution, Sales Department, 24, Victoria Street, London, S.W.1, price 2s.

**RECORD VOLUME OF TOURIST TRAFFIC.**—There was a record volume of tourist traffic to Britain during 1950 despite the unsettled conditions which it had been feared might have reduced the number of visitors during the latter part of the year. Sir Alexander Maxwell, Chairman of the British Travel & Holidays Association, stated recently that the target of 600,000 visitors for 1950 has been surpassed by nearly 3,000. They had been reconciled, stated Sir Alexander Maxwell, to a falling-off in traffic during the late winter of 1950, but in fact each month had shown a steady increase over the previous year. Unless, however, there was a turn for the better in the international situation, traffic in 1951 might not show so substantial an increase as was hoped for in view of the attraction of the Festival

of Britain. Tourist earnings for 1950, including fare payments on British owned ships and aircraft, were estimated provisionally at £76,500,000, against £64,000,000 for 1949, and the estimate of 602,979 visitors compared with 555,554.

**EXPORT OF IRON AND STEEL GOODS.**—The Board of Trade announces that as from February 12 the export of iron and steel goods under open general licence is permitted only if the value exceeds the value of the iron or steel content calculated at £21 a ton. This applies to iron and steel goods specified in Group 6 (2) of the first schedule to the Export of Goods (Control) (Consolidation) Order, 1950. Under a previous similar licence, which is revoked, the value was £16 16s. a ton. Inquiries by exporters regarding this licence should be made to the Export Licensing Branch, Board of Trade, Regis House, King William Street, London, E.C.4.

**TENSILE CREEP TESTING.**—Increasing use of metals at high temperatures has made it essential that satisfactory information should be available about the behaviour of metals at these temperatures. This automatically has given rise to a considerable increase in creep testing and has shown the need for standard methods. Recent British Standards (B.S. 1686, 1687, 1688: 1950) originated in specifications prepared specially to meet the needs of the aircraft industry, but the field of application was so wide, that they have been now published

in the general series. Copies may be obtained from the British Standards Institution, Sales Department, 24, Victoria Street, London, S.W.1, price 2s.

**DECEMBER ROAD CASUALTIES.**—According to Ministry of Transport statistics, road casualties in December, 1950, totalled 15,569, compared with 16,513 the previous year. Deaths on the road in the month were 355 (against 537), 3,722 persons were seriously injured (4,200), and 11,492 slightly injured (11,776). The decrease was probably due to exceptionally heavy snow, which kept people and traffic off the roads.

**BRITISH RAILWAYS STAFF SUGGESTIONS SCHEME.**—During the first twelve months of the British Railways suggestions scheme launched at the end of 1949 over 6,500 suggestions were submitted by the staff and 585 people received awards ranging from £2 2s. to 25 guineas. More than 500 other suggestions were considered to be of sufficient merit to rank for awards. The suggestions covered a wide range of activities, including locomotive working, services, staff duties, travel facilities, printing, engineering works, signalling, and electrification. Suggestions adopted included improvement to engine fire grates, improved methods of welding on standard coaches, prevention of fraudulent travel, improved service by the concentration on one depot of traffic formerly handled at three, and a method of loading more cases of whisky into shock-absorbing wagons.

## RAILWAY NEWS SECTION

## PERSONAL

Mr. W. Brown, Senior Assistant to Director of Accounts, British Transport Commission, has been appointed Assistant Accountant, Eastern and North Eastern Regions, British Railways.

We regret to record the death on February 9 of Mr. G. T. Pheby, J.P., Chairman, Southern Railway Servants' Orphanage.

Italian war fronts. In 1919 he returned to the Great Southern & Western Railways as Materials Inspector, and became Locomotive Running Assistant to the Chief Mechanical Engineer in 1922. After the formation of the Great Southern Railways group, Mr. Meredith was appointed Assistant Works Manager at Inchicore, and joined the Great Northern Railway (Ireland) as Works Manager at Dundalk in 1926; he became Assistant Mechanical

was Chairman from 1928 to 1933. During the recent war he was Chairman of the United Kingdom Commercial Corporation.

Mr. E. D. Trask, M.I.Mech.E., M.I.Loco.E., Assistant Motive Power Superintendent, Scottish Region, British Railways, who, as recorded in our February 9 issue, has been appointed Motive Power Superintendent, Scottish Region,



*Mr. R. W. Meredith*  
Appointed Acting Mechanical Engineer,  
Great Northern Railway (Ireland)



*Mr. E. D. Trask*  
Appointed Motive Power Superintendent,  
Scottish Region

Mr. R. W. Meredith, A.R.C.Sc.I., M.I.C.E.I., previously Assistant Mechanical Engineer & Works Manager, Great Northern Railway (Ireland), who, as recorded in our January 12 issue, has been appointed Acting Mechanical Engineer, will, in this position, be responsible for the company's Locomotive, Carriage & Wagon Department, Locomotive Running Department and Electrical Department, also the road motor passenger and freight fleets. He was educated at Aravon School and at the Royal College of Science in Ireland, where he was awarded an industrial bursary for two successive years by the Royal Commissioners for the Exhibition of 1851. He entered the service of the Great Southern & Western Railways in 1912 as a pupil of the late Mr. R. E. L. Maunsell, at that time Chief Mechanical Engineer to the company. In March, 1916, Mr. Meredith received a commission in the R.A.S.C., and served three years as a Workshops Officer in a mechanical transport section attached to siege artillery on both the French and

Engineer & Works Manager in 1939. He was elected a Member of the Institution of Civil Engineers of Ireland in 1944.

We regret to record the death on February 8, at the age of 80, of Sir Francis Joseph, Bt., K.B.E., D.L., J.P., a former Director of the London Midland & Scottish Railway Company. He had been an L.M.S.R. Representative on Group No. 1 of the L.M.S. & L.N.E. Joint Committee, and on the Manchester South Junction & Altrincham Joint Committee. Among the Directorships he held were those of the Dundalk, Newry & Greenore Railway, Birmingham Railway Carriage & Wagon Co. Ltd., and the Midland Bank Limited. He was President of the Federation of British Industries in 1935 and from 1930 to 1944 was a Member of the Overseas Trade Development Council. Between 1940 and 1948 he was President of the Institute of Industrial Administration and was founder of the Central Pig Iron Producers' Association, of which he

began his career as a premium apprentice at Doncaster Works in 1911 under the late Sir Nigel Gresley. He served overseas in the first World war, was commissioned with the Royal Field Artillery in 1916 and later transferred to the Royal Air Force as a flying instructor. After the war he rejoined the G.N.R. at Ardsley (Leeds), and subsequently was stationed at Kings Cross. In 1923 he was appointed Assistant District Locomotive Superintendent, Neasden, and three years later became a technical Assistant to the Southern Area (L.N.E.R.) Locomotive Running Superintendent. After service at Grantham and Peterborough, Mr. Trask was appointed District Locomotive Superintendent, Gateshead, in 1934. In 1937 he became District Locomotive Superintendent to the combined Districts of York and Leeds, and in 1938 Locomotive Running Superintendent of the Scottish Area L.N.E.R. During the recent war, he was actively associated with the Home Guard and commanded the 10th Battalion of Royal Scots (H.G.). On nationalisation,



*Mr. F. S. Veltom*

Irish Traffic Manager, Western Region, who has retired



*Mr. A. J. Broughton*

Appointed Irish Traffic Manager, London Midland and Western Regions, British Railways



*The late Mr. G. C. Brighton*

Member, London Purchasing Commission, Argentine Ministry of Transport, 1948-51

Mr. Trask was made Assistant Motive Power Superintendent for the Scottish Region.

Mr. F. S. Veltom, Irish Traffic Manager, Western Region, British Railways, who, as recorded in our February 9 issue, has retired, joined the G.W.R. in 1897. He was five years at Paddington goods station, subsequently being removed to the Office of the General Manager, where he was attached to the Board of Trade, and Personal Injury and Workmen's Compensation Claims Departments. Mr. Veltom served in the Army throughout the first World war. He was transferred to the Chief Goods Manager's office at Paddington in 1921 as one of the chief representatives, and amongst other duties was connected with the seasonal traffics in West Cornwall and Jersey. In 1924, he was appointed Agent for Scotland, with headquarters at Glasgow, and he went to Bristol as Assistant Goods Superintendent in 1927. Mr. Veltom became Irish Traffic Manager, G.W.R., in 1928. He has been Chairman of the Cross-Channel Branch of the Federated Union of Employers. He is very interested in social work in Ireland and is a past Chairman of the City of Dublin Skin & Cancer Hospital; he is a Governor, and a member of the Irish Hospitals Bed Bureau. Mr. Veltom holds the Royal Humane Society's Vellum Certificate for saving life at sea.

#### C.I.E. APPOINTMENTS

The following appointments have been announced by Coras Iompair Eireann:—

Mr. Daniel Herlihy, Assistant Chief Engineer Adviser to the Department of Local Government, Eire, to be Chief Engineer, C.I.E.

Mr. O. V. S. Bulleid, Consulting Mechanical Engineer, to be Chief Mechanical Engineer.

Mr. P. T. Somerville-Large, Acting Chief Engineer, to be Deputy Chief Engineer.

We regret to record the death on February 2, at the age of 71, of Mr. Oswald Wans, M.I.C.E., M.I.Mech.E., M.I.Mar.E., who retired recently from the position of Chief Engineer, Ruston &

Hornsby Limited. He joined the company in 1910 and became Technical Manager in 1918. In 1930 he was appointed Chief Engineer and he became Technical Director in 1937, but continued to hold the position of Chief Engineer until last year.

Mr. A. J. Broughton, Irish Traffic Manager, London Midland Region, British Railways, who, as recorded in our issue of February 9, has been appointed Irish Traffic Manager, London Midland and Western Regions, began his railway career with the Midland Railway in 1901, and also served on the Great Central & Midland Joint Committee. From 1911 to 1914 he was Chief Clerk at a large station in the Northern area, and was then transferred to headquarters at Derby as outdoor representative on the personal staff of the Chief Goods Manager. In 1916 he was appointed headquarters inspector. When the L.M.S.R. was formed in 1923, Mr. Broughton joined the Chief General Superintendent's Department, but returned later to the Chief Goods Manager's Department for special work in connection with road transport, in the Northern Division. From 1928 to 1931 he was in charge of important sections of the Road Transport Department at Euston. In 1931 he became Assistant Irish Traffic Manager and he was appointed Irish Traffic Manager, L.M.S.R., in 1940. The same year he was co-opted a Member of the Dublin Port & Docks Board. He is a Member of the Institute of Transport and has been a Fellow of the Association of Certified and Corporate Accountants for over 30 years. Mr. Broughton is a Member of Council of the Irish Association of Chambers of Commerce, and of the Dublin Chamber of Commerce of which he was President during 1947-48.

We regret to record the death, at the age of 74, of Mr. R. C. Stanley, a Director of the Canadian Pacific Railway Company, and Chairman of the International Nickel Company of Canada.

We regret to record the death on February 8 of Mr. G. C. Brighton, a member of the London Purchasing Commission of the Argentine Ministry of Transport. He joined the London Office of the Central

Argentine Railway in 1909 and was appointed Assistant Stores & Shipping Superintendent, London, in 1934, and London Stores & Shipping Superintendent in 1946. Following the transfer of the British-owned Argentine railways to the Argentine Government in 1948 he became a member of the London Purchasing Commission of the Argentine Ministry of Transport.

We regret to record the death of Mr. W. J. Roycroft, Chairman of the Schull & Skibbereen Railway between 1919 and 1924.

British Railways, Southern Region, has announced the following appointments:—

Mr. P. N. Kerney, Fire Officer, to be Fire Officer & Acting Civil Defence Officer.

Mr. E. P. W. Robins, General Assistant, Portsmouth, Marine Department, to be Divisional Marine Manager, Portsmouth, in place of Mr. C. T. Pelly, retired.

Mr. J. E. Bell, Works Manager, Ashford, to be Locomotive Works Manager, Ashford.

Mr. L. I. Sanders, Assistant to Works Manager, Ashford Works, to be Carriage & Wagon Works Manager, Ashford.

We regret to record the death on February 11, at the age of 84, of Mr. J. H. Smeddle, O.B.E., T.D., M.I.Mech.E., who retired as Locomotive Running Superintendent, North Eastern Area, L.N.E.R., in 1931. He began his career with the North Eastern Railway and after various appointments he became Divisional Locomotive Superintendent, York, in 1906. He was recalled to the Army in 1915, but soon afterwards was released to strengthen the N.E.R. Mechanical Engineering Department at Darlington headquarters, during the absence of Sir Vincent Raven on Government duty. In 1919 he was appointed Running Superintendent, North Eastern Railway, and on the 1923 amalgamation became Locomotive Running Superintendent, North Eastern Area, L.N.E.R.; he retired in June, 1931. His son, Mr. R. A. Smeddle, is Deputy Mechanical & Electrical Engineer, Southern Region, British Railways.

## Ministry of Transport Accident Report

Whitehouse West Junction; London Midland  
Region, British Railways: May 13, 1950

Brigadier C. A. Langley, Inspecting Officer of Railways, Ministry of Transport, inquired into the accident which took place at 10.30 p.m. on May 13, 1950, at Whitehouse West Junction, near Preston, when the 10.20 p.m. passenger train, Preston to Southport, consisting of four bogie coaches drawn by a Class "3" mixed-traffic type 2-6-2 engine, bunker leading, and running under clear signals, collided with a Class "F" 2-8-0 engine, which was standing ahead of a crossover and had been overlooked by the signalman.

Of the 80 passengers eight were seriously injured, and 15 others treated in hospital, but not detained; 40 received minor injuries. Five railway servants were injured. Assistance was quickly obtained. The train engine was derailed and badly damaged, and the rear of the first coach and front of the second were telescoped for approximately two compartment lengths. The light engine had its brakes off and was driven forward 140 ft., but was not derailed and suffered remarkably little damage. Normal working on both lines was resumed by 7.0 a.m. the next morning. It was a fine clear night.

Three-position block telegraph is in operation with mechanical "train waiting" slides to lock the commutator at "train on line." There are no track circuits. The accompanying diagram shows the lines, signals, and other details essential to an understanding of the case.

The trailing crossover, under the main-line over-bridge, can be seen clearly from the signal box, as can an engine waiting on the up line at its Southport end, provided it does not pass the points by more than an engine length, but if it moves further, it is somewhat obscured though it can be seen for a long distance by leaning out of the window. The next signal box towards Southport was closed, and when this is the case, engines crossing over at this point are required to be brought forward from the home signal under Rule 38(b), exception ii, which provides for the giving of a verbal instruction or green hand signal. This does not authorise the driver to go right away.

There is an average of 30 up and 32 down trains each weekday through the West Junction and about 12 engines are turned daily on the triangle.

### Evidence

The driver of the light engine said that he was instructed to turn his engine round the triangle, and after passing South Junction saw the West Junction home signal off. (This was contrary to rule). He ran through to the far end of the crossover and stopped with the tender about 10 yd. beyond the points. He took the brake off and whistled. The fireman changed the head and tail lights. After about 2 min. he noticed from the fireman's side the points reversed for the down line, and expected the ground signal to clear, but after a further 3 min. saw that the points had been put back to normal. On both occasions he observed them move over.

The fireman got down shortly after to walk to the box and came running back shouting that there was a train approaching. The driver had no time to take action and was thrown out on to the 6 ft. way by the impact. He was quite sure that the ground signal was not cleared for him, but

admitted that he had not been looking out of the cab all the time, as he and the fireman had been having tea. He did not realise that he had been standing for over 10 min.

The fireman generally confirmed this evidence and said he also saw the points come over, but did not see any shunt signal changed. He had been talking to the driver and had not realised they had been waiting so long.

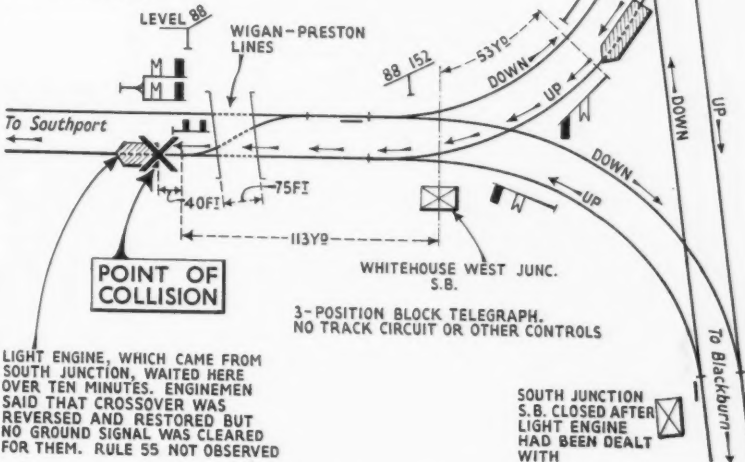
The driver of the passenger train saw all signals off for him and passed through North Junction at 20 to 25 m.p.h. When they were opposite West Junction home signal the fireman shouted that there was an engine in front. He saw it almost at the same time and thought he had reduced speed to 20 m.p.h. when they struck it.

His fireman gave similar evidence. Tests made under like conditions showed that the

accepting the one in question from South Junction at 10.13 p.m. He cleared his home signal for it and it arrived 4 mins. later. He obtained "line clear" for it on the down line from North Junction, and when he saw its tail light stop moving reversed the points and pulled starting and shunt signal levers. Having seen the lights on the engine change from red to white he left the window and went to his desk to have a cup of tea. A train passing on the

10.20 P.M. PASSENGER TRAIN, PRESTON TO SOUTHPORT, RUNNING UNDER CLEAR SIGNALS, RAN INTO LIGHT ENGINE, OVERLOOKED BY SIGNALMAN, WHO SAID HE REVERSED CROSSOVER AND CLEARED SIGNALS FOR IT TO PROCEED TOWARDS PRESTON; NOISE OF A TRAIN ON THE MAIN LINES MADE HIM THINK IT HAD LEFT

FINE CLEAR NIGHT



down trailing points of the crossover were not visible from the driver's side of the light engine, but they might possibly have been seen moving, as described by him, by a person looking for them from the fireman's side, although he would have difficulty in distinguishing the movement in the prevailing light. The shunt signals were clearly visible from the fireman's side and their backlights could be seen from the box, as could the engine's lights, but the enginemen on the approaching train could not have been expected to identify the obstruction until they were opposite, or even a little past the West Junction box.

The West Junction signalman had spent the last 12 months there and was quite familiar with the arrangements for turning engines. He had crossed one or two before

main-line bridge made him think it was the engine, although he did not see it or its tail light. Glancing through the bridge he was quite sure it had left and replaced the shunt, and eventually the starting signal, and returned the crossover to normal. At 10.25 p.m. he accepted the passenger train from North Junction, obtained "line clear" and pulled off his signals. When the collision occurred he sent "obstruction danger" and advised Control.

The South Junction signalman dealt with the engine and received "out of section" for it at 10.18 p.m. Shortly after that he closed his box. The man at the North Junction said he accepted the engine at 10.18 p.m., but did not receive "entering section" for it, although the West Junction man entered that signal as being given one minute later. (That man admitted, how-

ever, that he might not have sent it.) He obtained "line clear" for the passenger train at 10.23 p.m. and later heard West Junction informing Control of the collision.

#### Signalling Irregularities

During the inquiry a number of irregularities committed by the West Junction signalman came to light, including failure to record movements of engines and trains and violating certain block regulations. These were found to have been going on for some time. The report gives details of these matters. Examination of the train book by an inspector and his assistant and by a stationmaster had not revealed them. It would not have been possible, however, to check omissions of light engine movements without reference to the books in adjacent boxes and failure to record passenger trains might also have been missed, unless a special investigation was made. The inspector said that this continual slackness came as a surprise to him, especially as the signalman had been a booking lad. There was nothing in the working of the box which could have led a man to miss bookings.

#### Inspecting Officer's Conclusion

This accident was due primarily to the gross negligence of the West Junction signalman in accepting the passenger train without making any proper attempt to satisfy himself that the line was clear. He acted incorrectly in failing to stop the light

engine at the home signal and did not call it forward in accordance with the rules. These mistakes were a culmination of a series of irregularities committed that day and during the two previous months. He is 22, with two years clear record as a signalman, but in view of the serious deterioration in his work now disclosed he is, in Brigadier Langley's opinion "no longer fit to remain in such an appointment."

He considers also that sufficient care was not exercised in the examination of the train registers at this man's box, and the importance of checking them does not seem to have been fully appreciated. Entries in these books provide not only a record, but can also be of great assistance to a signalman himself, especially when delays occur, and they give a good indication of a man's method of working. Having become negligent in this respect this signalman had become so in others. Prompt correction of his initial errors might well have deterred him and Brigadier Langley is obliged to conclude that supervision was inadequate in this case.

The driver of the light engine must bear some share of the responsibility for failing to carry out Rule 55. He and his fireman were talking and drinking tea and failed to realise how long they had been waiting. It was the driver's responsibility to send the fireman to the box immediately after being detained at the crossover, and clearly he was not paying sufficient attention to his

duties. He is 48, with 32 years service, as driver for ten years, with a clear record.

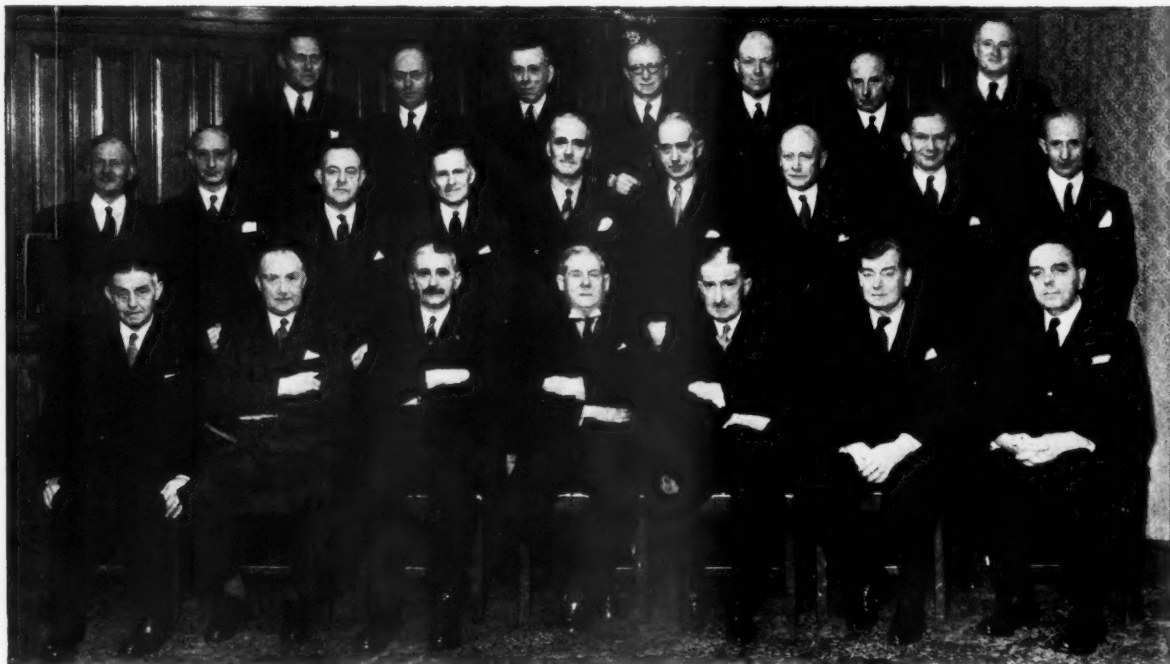
#### Remarks

Brigadier Langley is not prepared to recommend the installation of modern block, etc., controls at this place while these "most desirable safety measures" are more urgently needed elsewhere. Whatever safety appliances are provided "reliance must always be placed primarily on the integrity of the signalman." This accident was "clearly due to the inexcusable neglect of fundamental safety rules by a man who had become thoroughly unreliable and whose slack methods of working had not been noticed. The importance of proper supervision, especially of young members of the staff, should need no emphasis."

#### Talgo Trains in Spain

Lightweight trains built on the Talgo system in U.S.A. for American and (with adjustments for the 5-ft. 6in. gauge) Spanish railways were described and illustrated in *The Railway Gazette*, June 24, 1949, issue. Two of these trains have been running in the Spanish State Railways winter service thrice weekly in either direction over the main line between Madrid and Hendaye/Irun on the French frontier, where connection is made with the "Pyrénées-Côte

### Lord Hurcomb with Scottish Region Officers in Glasgow



Lord Hurcomb, Chairman of the British Transport Commission, with officers of the Scottish Region, British Railways, on the occasion of his visit to Scotland last week (see article in our February 9 issue)

Front row (left to right): Messrs. H. G. Sayers, Operating Superintendent; T. H. Moffat, Deputy Chief Regional Officer; Sir Ian Bolton, Member, and Lord Hurcomb, Chairman, British Transport Commission; Messrs. T. F. Cameron, Chief Regional Officer; J. H. Brebner, Chief Public Relations & Publicity Officer, B.T.C.; T. H. Hollingsworth, Commercial Superintendent. Second row (left to right): Messrs. G. S. Bellamy, Mechanical & Electrical Engineer; A. Stewart, Assistant to Chief Regional Officer; C. H. Brazier, Regional Staff Officer; C. R. Atkins, Stores Officer; J. G. Dunlop, Accountant, M. Wallace, Solicitor, Scotland, B.T.C.; W. Y. Sandeman, Civil Engineer; L. E. Marr, Assistant Commercial Superintendent; E. D. Trask, Motive Power Superintendent. Back row (left to right): Messrs. W. A. R. Mailer, Medical Officer; I. R. Frazer, Assistant Civil Engineer; W. Bryson, Signals & Telecommunications Engineer; J. Hastie, Treasurer; W. L. Turner, Road Motor Engineer; R. D. Kerr, Assistant Marine Superintendent; H. M. Hunter, Public Relations & Publicity Officer

d'Argent Express" to and from Biarritz, Bordeaux, and Paris; an illustration of one such train at Irun appeared in our issue of January 5.

Northbound, the train leaves Madrid Norte at 12.40 p.m. on Mondays, Wednesdays, and Fridays, and covers the 396 miles to Irun in 8 hr. 25 min. The "Pyrénées-Côte d'Argent Express" reaches Paris Austerlitz at 9.10 a.m. next day, so that the overall time of 20 hr. 30 min. from Madrid to Paris far surpasses that of 26 hr. 30 min. by the "Sud Express." Southbound, passengers leave Paris at 9.30 p.m. The Talgo train leaves Irun at 9.50 a.m. on Tuesdays, Thursdays, and Saturdays, and reaches Madrid at 6.45 p.m. Connections from and to Madrid are given at Miranda del Ebro, on the main line, and to and from Bilbao by railcar.

Fast running northbound includes a run from Avila to Valladolid, 80 miles, in 80 min., mainly downhill, with maximum permissible speed of 75 m.p.h. On other sections, including the descent from Vitoria to San Sebastian, speeds are seldom allowed to exceed 50-55 m.p.h. Southbound, the 52 miles from Burgos to Venta de Banos are covered in 47 min., also with a speed limit of 75 m.p.h., and of 50-55 m.p.h. on most other sections.

Restaurant service, with meals served to passengers in their seats, is provided by the International Sleeping Car Company.

## More Train Cuts to Save Coal

The Railway Executive has effected further reductions in passenger services, as from February 12, to help meet the Government requirement for an overall reduction of 10,000 tons a week in coal used for passenger trains, applying to some 1,500 services additional to those already announced. From the same date, special excursion trains also are being curtailed. As stated in our last week's issue, these reductions will effect a further reduction of 4,250 tons of coal a week.

Until Easter (or until the duration of the cut in coal supplies is known) the only excursion trains to be run are those in connection with fixed events, including football matches and race meetings, for which there is a big public travel demand, and in other cases where commitments with organisers to run excursions have already been undertaken. All other special excursion trains have been withdrawn as from February 12, and where these have already been advertised notices of withdrawal are being issued. There are no alterations for the time being in the arrangements for excursions and cheap-day bookings by ordinary services, but the loading of trains is being watched carefully. Advance bookings for works outings and similar excursions in the spring and summer are being made on the assumption that conditions will allow them to be run after Easter.

### British Railways Cancellations

Principal withdrawals on British Railways from February 12 include:

**Eastern Region:** 9.18 a.m. Kings Cross to Leeds and Bradford ("White Rose"); 3.15 p.m. Leeds to Kings Cross to run on Mondays only; 10 a.m. Bradford to Marylebone and 4.50 p.m. Marylebone to Bradford ("South Yorkshireman"); 12.25 p.m. Liverpool Street to Cromer (not Saturdays). Certain restaurant cars are withdrawn.

**London Midland Region:** 2.30 p.m. Euston to Liverpool and 4.10 p.m. Liverpool to Euston; 4.55 p.m. Euston to Heysham and 6.30 a.m. Heysham to Euston

("Ulster Expresses") to run thrice weekly in connection with reduced Heysham-Belfast service; 5.45 p.m. Euston to Wolverhampton ("Midlander") and 9.40 a.m. Wolverhampton to Euston; 3.12 p.m. St. Pancras to Bradford and 9.5 a.m. Bradford to St. Pancras. Certain restaurant cars are withdrawn.

**North Eastern Region:** 10.15 a.m. York to Lowestoft and 9.45 a.m. Lowestoft to York; also some expresses between Yorkshire and Lancashire cities.

**Scottish Region:** 7.14 a.m. St. Andrews to Glasgow and 4.7 p.m. Glasgow to St. Andrews ("Fife Coast Expresses"). Certain restaurant cars are withdrawn.

**Southern Region:** 11 a.m. Waterloo to Ilfracombe ("Atlantic Coast Express") and 2.25 p.m. Plymouth to Waterloo.

**Western Region:** 11.45 a.m. Paddington to Hereford; 11.55 a.m. Paddington to Milford Haven and 11.5 a.m. Milford Haven to Paddington to run on Mondays and Saturdays only; 3.30 p.m. Paddington to Penzance; 7.10 p.m. Paddington to Wolverhampton; 11.45 a.m. Bristol to Paddington; 7.50 p.m. Birmingham to Paddington; also some cross-country services between the North, the Midlands, South Wales, and the West of England.

### London Transport Reductions

To save coal, reductions have been made in railway, tram, and trolleybus services, though bus services are not affected. Train services curtailed include Edgware Road to Putney Bridge and Wimbledon service, also on the Northern Line.

## R.E. (Tn.) Supplementary Reserve

The annual dinner of the Royal Engineers (Transportation) Supplementary Reserve was held at the Criterion Restaurant, London, W.1, on Friday, February 9. Field-Marshal Sir William J. Slim, Chief of the Imperial General Staff and Honorary Colonel, was the chair and the guests included:—

Mr. J. Benstead, Major-General M. S. Chiltern, Messrs. J. Cliff, B. W. C. Cooke, Lt.-Colonel J. Elliot, Mr. Leslie E. Ford, Lt.-Colonel C. P. Hopkins, Lord Hurcomb, Mr. D. R. Lamb, Sir Ralph Metcalfe, Mr. S. C. Parkin, Colonel Sir J. Douglas Ritchie, General Sir G. Ivor Thomas and Colonel J. C. L. Train.

Field-Marshal Sir William Slim proposed the health of the guests. He referred in particular to Lord Hurcomb and Mr. J. C. L. Train, whom he had known well during his membership of the Railway Executive. He extended a warm welcome to Mr. John Elliot and congratulated him on his appointment as Chairman of the Railway Executive. He was glad also to see present Mr. C. P. Hopkins, whose career he followed with great interest; he noted with pleasure that his curve was on the upgrade.

He went on to refer to the fact that the Transportation Supplementary Reserve had a close liaison with those who provided transport in normal civil life. Transport was the lifeblood of all activity, whether it was that of an army or of a nation. The army side relied on the civilian element more than was the case in any other branch of army life. Very shortly, officers of the reserve would be asked to take on the "Z" reservists as they were called up. It would not be easy to deal with the influx but it would not prove as difficult as many tasks performed in the past.

Sir J. Douglas Ritchie, Vice-Chairman of the Port of London Authority, who

responded to the toast, said that the London Docks in particular had always provided dockers for the army. He was sure that the dock authorities were as determined to co-operate with the military authorities in the future as they had done in the past, in providing trained personnel for use in an emergency.

Brigadier C. E. M. Herbert, Director of Transportation, War Office, and Commandant, Transportation Centre, Royal Engineers, said that two of the outstanding needs at the present time were for dockers and cooks. He hoped that the Hotels Executive would take note of the second requirement. Because of the call up of "Z" reservists, it had been necessary this year to cancel Public Day at Longmoor.

During the evening music was provided by the band of the Corps of Royal Engineers.

## Parliamentary Notes

### Railwaymen's Safety and Welfare

Mr. Ivor Owen Thomas (The Wrekin—Lab.), on the motion for the adjournment of the House of Commons on February 8, raised the question of the health and welfare service of the staff of British Railways. He said the great bulk of railwaymen were not covered by legislation for health and welfare in their employment. The provisions of the Factory Acts did not apply to them. Under the Transport Act, 1947, provision had been made by the B.T.C. for the Railway Executive to set up, in conjunction with the unions, a joint welfare advisory council. The London Transport Executive considered the welfare machinery that existed before nationalisation as adequate.

The Committee of Inquiry on Health, Welfare & Safety in Non-Industrial Employments, he continued, set up in 1946 by the Home Secretary and the Secretary of State for Scotland, reporting in March, 1949, on the need for statutory minimum standards for the railways, stated that it would have been the Committee's duty, if the railways had not been nationalised, to recommend a statutory court of welfare and safety for railway employees. The Committee could not agree that had become unnecessary because the railways were now nationalised and special machinery had been set up for consultation between management and workers on such matters.

The National Coal Board was not exempt from legislation such as the Factory Acts, and the Committee saw no reason for treating the B.T.C. differently. Mr. Thomas went on to give details of the Committee's recommendations as to welfare measures. Representations regarding these measures had also been made by the railway unions.

Special recommendations were also made for improvements to running sheds. The Committee had considered them separately because they more nearly resemble factories than any other premises reviewed. First-aid arrangements were criticised and compared unfavourably with those required in factories of comparable size.

### Look-Out Men

Mr. Thomas criticised the safety measures (look-out men and so on) for staff working on or near the permanent way. He appealed to the Minister to give an assurance that the recommendations of the Committee with reference to railway staffs should be given early attention.

Mr. John Hynd (Attercliffe, Sheffield—Lab.) said that welfare conditions on the

railways had been a scandal for many years. The railways had probably suffered from being pioneers and so they had to bear with out-of-date premises and working conditions. Since nationalisation, things had much improved, but much remained to be done. One argument put forward against look-outs for men working on the line had been their cost.

Mr. Alfred Barnes said he much agreed with some of the views expressed. In many respects the railways fell a long way behind in welfare facilities. It was not the Ministry of Transport which established or set up the Committee, but the Home Office; the report dealt with far wider problems of welfare and safety than were covered by that debate, and only a small part of it was devoted to railways. Members must not assume that nothing was being done. The Home Secretary had established a Departmental Committee, because many departments were affected by the report, and that was receiving examination. A representative of his own Department was a member of the committee. But that aspect of the problem involved legislation.

#### Improvements Since Nationalisation

Criticisms of conditions on the railways, said Mr. Barnes, could not be levelled against the B.T.C. or the Railway Executive, for those conditions dated back to pre-nationalisation days. The Ministry of Transport as such could not take action on the report separately, because that was primarily the responsibility of the Home Secretary. Regarding the railway aspect, during the war, when the railways were under the control of the Government, millions of pounds were spent through the agency of the wartime Railways Executive in providing considerable welfare facilities by way of canteens, hostels, and so on. Since he had been Minister one very important welfare centre at Old Oak Common, costing about £250,000, had been built and opened. That was during the time of the nationalised industry. So far as the present railway administration was concerned, much had been done, despite the financially difficult conditions under which the railways laboured.

Under the Transport Act, continued Mr. Barnes (and this part of that Act received general support from all parts of the House), responsibility was laid on the B.T.C. to set up welfare arrangements and consultative machinery. One of the first things done by the Commission was to give effect to that part of the Act, and a joint committee was established with the railway unions. That committee, he admitted, because of financial circumstances had not perhaps provided the drive, nor produced the desired results, but it had established standard requirements which would be followed, and, more or less, it followed the lines of the Home Office Committee.

He felt that, say, during the current financial year certain expenditure would take place. But it was a considerable advance in the railway industry that representatives of the men were sitting side by side with the B.T.C. as the new Executives were created, and were establishing standards over the whole field of railway administration. When they came to the question of legislation, whatever the Home Office might determine, the Ministry of Transport, the B.T.C., and the Railway Executive would view it with sympathy.

#### British Transport Commission Bill

The British Transport Commission Bill was presented to the House of Commons on February 2 and formally read the first time. The object of the Bill is to empower

the B.T.C. to construct works and to acquire lands; to revive the powers and extend the time for the construction of certain works; and to confer further powers on the Commission for other purposes. Petitions against the Bill have been deposited in the Private Bill Office by certain local authorities and interests.

### Questions in Parliament

#### Passenger Train Cuts

Mr. James Harrison (East Nottingham—Lab.) on February 5 asked the Minister of Transport to what extent he had accepted financial responsibility for losses incurred by the B.T.C. as the result of his directions to the Commission to cut trains.

Mr. Alfred Barnes in a written answer stated, I have not directed the Commission to cut rail passenger services. In common with industry, the railways have had to accept a reduction in deliveries of coal and to meet this have found it necessary to take off a number of trains. I am not in a position to accept any financial liability for any losses which may result.

#### Road Hauliers' Licences

Mr. Cyril Osborne (Louth—C.) on February 5 asked the Minister of Transport if he was aware that private road hauliers licences to operate outside a 25-mile radius were being withdrawn in Lincolnshire; and, since the country farmers were dependent on the services of the private haulier, if he would introduce legislation to increase the maximum radius to at least 60 miles.

Mr. Alfred Barnes in a written answer stated, I assume this question refers to permits issuable by the B.T.C. and not to carrier's licences under the Road & Rail Traffic Act, 1933. I am not prepared to introduce legislation to alter the conditions under which goods may be carried for hire or reward by road without such a permit. The necessary services beyond the 25-mile radius will be provided either under permit or by the Commission.

#### Nationalisation of Bus Undertakings

Mr. John Hall (West Gateshead—Lab.) on January 30 asked the Minister of Transport what progress was being made in nationalisation of road passenger transport in north-east England; and when he thought it likely that action would be completed.

Mr. Alfred Barnes stated in a written answer: The B.T.C. has submitted a scheme for the Northern Area, and in accordance with the procedure prescribed in the Transport Act, 1947, I have returned it to them with my observations, and it is still under discussion.

#### Rail Rates for Farm Produce

Lt.-Commander L. W. Joynson-Hicks (Chichester—C.) on January 25 asked the Minister of Agriculture, what was the estimated increase in transport charges of agricultural commodities allowed for in the price review of February 1950.

Mr. Thomas Williams: The estimated cost to the farming community of the increased rail transport charges which came into effect last spring is £2½ millions, of which £1,600,000 relates to milk and other commodities covered by the procedure of the Annual Price Review.

#### Road Haulage Delays

Major Christopher York (Harrogate—C.) on the motion for the adjournment of the House of Commons on January 31 raised

the question of the B.T.C. failure to provide adequate road haulage services, and gave illustrations of high rate quotations and alleged inefficiency.

Mr. Alfred Barnes, citing the Carter Paterson organisation as an example of nationalised road transport, said that in 1946 the claims per 10,000 parcels handled by the organisation were 28 per cent.; in 1950, the first year it was operated under the Road Haulage Executive, claims declined to 21 per cent. Inquiries as to accuracy of delivery for every 10,000 packages amounted in 1946 to 50 per cent.; in 1950, proof of delivery inquiries declined to 27 per cent. They could not take over 2,500 to 3,000 businesses in the course of a year and re-shape them into a national organisation without defects.

#### Wood Logs in Railway Yards

Mr. Geoffrey Lloyd (King's Norton, Birmingham—C.) on February 5 asked the Minister of Fuel & Power whether in view of the shortage of domestic coal, he would take all possible emergency action to facilitate supplies of logs in Birmingham.

Mr. Philip Noel-Baker: I understand that Mr. Lloyd has in mind the difficulties of certain coal merchants who were not allowed to stock wood logs in railway yards. I have taken the matter up with the Minister of Transport and these difficulties have now been overcome.

### Staff & Labour Matters

#### Railway Wages

The report of the court of inquiry on railway wages and salaries, set up by the Minister of Transport, recommends increases amounting in most grades to about 5 per cent., subject to acceptance by the unions of changes in working arrangements designed to economise in manpower and increase efficiency. The cost of the proposed increases is estimated at about £7 million a year in respect of 465,000 workers out of a total railway staff of some 600,000. Most of the others are railway shopmen, numbering 149,000, for whom a separate wage claim is pending.

The recommendations follow in general the lines of the offer made by the Railway Executive in November, 1950, the main difference being the court's recommendation of a large increase for the highest grades. It is suggested that the rates for engine drivers and motormen in the highest grade be increased by 10s. 6d. instead of the 7s. offered by the Executive, that the rates for signalmen in special classes be increased by 9s. 6d. instead of 7s., and that the rates in the highest categories of salaried staff be increased by £30 or £35 a year instead of £25.

#### Maximum Burden on Railways

The report considers that the advances in wages and salaries which it recommends are the maximum within the capacity of British railways to pay without imposing intolerable financial burdens.

Subject to the acceptance of the proposed increases and changes in working arrangements by all parties, it is proposed that the increases date from January 1, 1951. Changes in working conditions include removal of rigid lines of demarcation between the duties of associated grades or individual members of the staff; abolition of calling-up; the agreement for reducing the number of van guards in the London area to be operated; extension of lodging turns where economy will result; working of overtime within reasonable limits; full effect to be given to rostering

up to nine hours, and the application of the five-day week where practicable. In addition to the Railway Executive's proposals, the court recommends that the minimum allowance to men lodging away from home be increased from 6s. to 9s. and that the Executive shall endeavour to space out lodging turns as widely as possible.

It is suggested that these arrangements come into force from April 2.

The court urges upon the Executive and the unions the extreme importance of co-operating and collaborating with each other at all levels.

## Contracts & Tenders

The National Coal Board has placed an order with the Hunslet Engine Co. Ltd. for two 0-6-0 saddle tank locomotives. One locomotive is to be of the "Austerity" type, weighing 48 tons 10 cwt., and the other is to weigh 41 tons.

The Rhodesia Railways have recently placed the following contracts, under the inspection of the Consulting Engineers, Messrs. Freeman Fox & Partners:—

Gloucester Railway Carriage & Wagon Co. Ltd.: 60 fourth class passenger coaches (in addition to existing orders).

G. R. Turner Limited: 400 four-wheel drop-side wagons.

Metropolitan-Cammell Carriage & Wagon Co. Ltd.: 10 first class and 15 second class passenger coaches; 8 passenger, guards & baggage vans; 300 bogie high-side wagons; 300 bogie drop-side wagons. (The total value of these orders is just over £1,300,000).

S.A. des Ateliers de Construction de Familiaux (London Representatives: C. M. Hill & Company, 44, Tower Hill, E.C.3): 100 bogie covered wagons.

Of a total of 82 coaches previously ordered by Rhodesia Railways from the

Metropolitan-Cammell Carriage & Wagon Co. Ltd., 33 have been despatched. The same company completed an earlier order by Rhodesia Railways for 1,030 bogie high-side wagons last year.

The Rhodesia Railways have also placed an order with Henschel & Sohn G.m.b.H. for 20 "19D" class 4-8-2 locomotives (South African Railways type), with modifications.

## Notes and News

**Mansion House Association on Transport.**—The Annual General Meeting of the Mansion House Association on Transport will be held on April 5 at the Trocadero Restaurant, Piccadilly Circus, W.1. It will be preceded by luncheon at which the principal guest will be Mr. George R. Strauss, M.P., Minister of Supply.

**Record Monthly Steel Output.**—The last of the monthly figures for the British steel industry to be issued before nationalisation show that the January output was the highest production rate ever achieved for that month. Production in January, which was affected by the New Year holiday, was at an annual rate of 15,907,000 tons, as compared with 15,873,000 a year ago.

**More Avalanche Damage in the Alps.**—Further avalanches in the Alps have caused loss of life and damage. Airolo, at the southern end of the Gotthard Tunnel, was hit by an avalanche last Sunday night, interrupting services on the Gotthard line.

**Belfast-Liverpool Summer Sailings.**—The Belfast Steam Ship Company announces that sailing tickets will be needed on the following days: from Belfast, Fridays July 6-August 10 inclusive, and Saturdays

July 7, August 4 and 11; from Liverpool, Fridays July 13-August 10 inclusive, and Saturdays July 14 and 28, and August 4 and 11. The company's two motor vessels *Ulster Monarch* and *Ulster Prince* are back in service after overhaul. There has not yet been an announcement regarding sailing tickets for the British Railways Heysham-Belfast service.

**Nitrate Railways Repayment.**—The Nitrate Railways Co. Ltd. announces a repayment of a £3 share on the ordinary and preferred converted ordinary capital. Both classes of shares are of a nominal value of £7 fully paid, and £3 a share was repaid in August last.

**Rebuilt Rhine Bridge at Roppenheim.**—For the information contained in the article in our January 26 issue, we should have acknowledged our indebtedness to our French contemporary, *Travaux*. Further, it should have been stated that the Etablissements Fives-Lille were the main contractors for the reconstruction work.

**David Brown Share Offer.**—An offer has been received by David Brown & Sons (Huddersfield) Ltd. from the David Brown Corporation to buy its shares for cash at the following prices per share: 6 per cent. preference, 25s.; 6 per cent. "A" preference, 25s.; 8 per cent. "B" preference, 31s.; participating preference, £6 10s.; ordinary, £6 10s. The offer is conditional on acceptance by 90 per cent. of the shareholders of each class.

**Agreement with Socony-Vacuum.**—Mr. Noel-Baker, Minister of Fuel & Power, on February 12 announced a new agreement dealing with the sterling trade of the Socony-Vacuum Oil Co. Inc. The new agreement provides that Socony-Vacuum will endeavour progressively to reduce the

## Presentation to Lt.-Colonel Harold Rudgard



Mr. H. Adams Clarke, Chief Officer (Staff & Establishment), Railway Executive, presenting, on behalf of officers of the Railway Executive, a television set to Lt.-Colonel Harold Rudgard, who retired recently as Chief Officer (Motive Power), Railway Executive

dollar cost of its operations in and through the sterling area to a figure comparable with the dollar cost of British companies. Socony-Vacuum affiliates in the sterling area will enjoy the same freedom of trade as the British-controlled oil companies. Further dollar saving to be achieved by this new agreement will be obtained partly by plans to supply mainly from sterling Middle East sources and in non-dollar tankers the crude oil requirements of the new refinery now under construction at Coryton in Essex by Vacuum Oil Co. Ltd.

**Iron and Steel Corporation Offices.**—The Iron & Steel Corporation of Great Britain is now in occupation of its offices at 1, Chester Street, London, S.W.1, telephone No. Sloane 0818. Mr. Ralph Cox, Assistant Secretary, is in charge of the Information Division. Since 1947 he has been Deputy Chief Information Officer to the Ministry of Supply.

**Presentation to L.M.R. Funds Assistant.**—Mr. R. O. Griffiths, who until he retired recently after 50 years of service, was Assistant for Funds to the Regional Staff Officer, London Midland Region, has been presented with a cheque from the members of the Insurance, Provident, and Pensions Societies Committee. Mr. R. Simpson, Regional Staff Officer, made the presentation. Mr. Griffiths was in addition secretary of eight railway insurance and pensions societies.

**Increased Price of Coal: Protest to Minister.**—The Director-General of the Federation of British Industries, Sir Norman Kipping, has protested to the Minister of Fuel & Power regarding the further rise in the price of coal. Other industries, it is claimed, had proved that by increased productivity costs could be kept down below the levels that otherwise would have been necessitated by rises in the cost of imported raw materials. Undertakings had now been given for an increase in coal output, and it was precipitate to raise the price before the undertakings had been given time to take effect. The added burden represented by the rise in price was equivalent to more than £50,000,000 a year, which would add

to costs everywhere. Increases in coal output per man would materially reduce, if not cancel, the need to raise from consumers this very large sum. The National Coal Board had departed from its undertaking in future to relate the price to grade of coal. Firms that had bought plant to burn cheaper grades were thus unfairly victimised.

**"Green Arrow" Service Restored for Export Traffic.**—The "Green Arrow" Registered Transits service is to be restored on British Railways from March 1 for full wagon loads of freight traffic for export, except traffic to Ireland. The fee will be 5s. per consignment in addition to usual carriage charges.

**Closing of Stations: L.M.R.**—As from February 12, Mickle Trafford Station has been permanently closed for passengers, parcels, and passenger train merchandise. Passengers now book to Chester Station from which point bus services operate to Mickle Trafford. Parcels and passenger train merchandise traffic are dealt with at Chester. Liverpool Langton Dock L.M.R. (G.W.) goods depot was closed for all traffic with effect from December 18 last. This depot is not rail connected, and was used solely as a receiving depot for traffic which was then conveyed by Railway Executive vehicles via the Mersey Tunnel to Birkenhead, Morpeth Dock, for onward transit by rail to Wales and the south.

**R.C.T.S. East London Tour.**—The Railway Correspondence & Travel Society is arranging a tour by special train, on April 14, of lines and junctions in East London, many of which have not been used by through passenger trains for several years. The train will start from Fenchurch Street Station at 2.30 p.m. and will proceed via Stepney East to Millwall Junction (reverse), then via Salmons Lane Junction, Gas Factory Junction, and Abbey Mills Lower Junction to North Woolwich (reverse), and back to Stepney East via Stratford Southern Junction, Bow Junction, and Gas Factory Junction. The train will then travel direct to East Ham, on to Woodgrange Park, and return to Stratford, via Forest

Gate, by 4.40 p.m. The fare for the journey is 3s. 6d. and tickets can be obtained (enclosing stamped addressed envelope) from Mr. R. K. McKenny, 46, Friern Barnet Lane, Friern Barnet, London, N.11, not later than March 22.

**Transport (Amendment) Bill.**—Opposition peers on February 13 carried the third reading of the Transport (Amendment) Bill by 60 votes to 33 against the Government in the House of Lords.

**York Festival 1951.**—Associated with the York Festival (of music, drama, art, and architecture) to be held from June 3-17 as part of the Festival of Britain, will be the York Railway Museum, open daily. The Festival Office is at 1, Museum Street, York.

**Institute of Transport.**—The Institute of Transport will hold an informal luncheon at the Connaught Rooms, Great Queen Street, London, W.C.2, at 12.30 for 1 p.m. on February 27. The speaker will be Sir Harold Scott, Commissioner of the Metropolitan Police.

**Change of Address.**—The address of Messrs. C. Mackenzie Jarvis & Partners, Consulting Engineers, formerly at Arithmus House, 8, Craven Road, London, W.2, has been changed to 26, Victoria Street, Westminster, S.W.1, telephone No. Abbey 4841.

**Transport Arbitration Tribunal.**—A sitting of the Transport Arbitration Tribunal has been arranged for February 19, at 10.30 a.m., for the purpose of hearing an application by the Gilchrist Road Service Limited for confirmation of an agreement with the Road Haulage Executive under Section 108 of the Transport Act, 1947, or, alternatively, such parts of the agreement as relate to compensation payable under Section 47 (1) and (2).

**C.I.E. Services Normal.**—The passenger services of Coras Iompair Eireann, which were augmented since the end of the strike, were restored in full on February 7. The existing timetables were reverted to, except certain services to Galway and Sligo. It is expected that a conference will be arranged shortly to discuss the proposals made by the Archbishop of Dublin to settle the dispute over wage claims between C.I.E. and the Irish Transport & General Workers' Union, which was responsible for the strike.

**L.M.R. Musical Society.**—Last week, the London Midland Region Amateur Musical Society gave three evening performances of the musical comedy, "Hit the Deck," at the Scala Theatre, London. It was the thirtieth season of the society. The performance on Thursday last was attended by Mr. John Elliot, the Chairman of the Railway Executive and formerly the Chief Regional Officer of the London Midland Region, by a number of past and present senior railway officers of British Railways, and by business friends of the railways. The society staged a colourful and musical performance which was enthusiastically received.

**Electricity Price to be Increased.**—The British Electricity Authority has announced that the increase in the price of coal of 4s. 2d. a ton will add some £7,500,000 a year to the cost of electricity generation. Part of this increase will be passed on automatically to consumers (mainly industrial) who are supplied on tariffs that include a coal-price adjustment clause. There is no margin to cover the £3,500,000 additional cost not thus passed on in present tariffs.

### Presentation to Mr. C. Grasemann



Mr. C. P. Hopkins, Chief Regional Officer, Southern Region, with Mr. John Elliot, Chairman of the Railway Executive, making a presentation to Mr. C. Grasemann, who retired from the position of Public Relations & Publicity Officer, Southern Region, on December 31

## OFFICIAL NOTICES

**AN INSURANCE ORGANISATION** with extensive connections in the Transport industry has vacancies on its outdoor staff for a number of young men. Excellent opportunities to those possessing good personality and anxious to succeed. Box 966, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

**RAILWAY SIGNALLING AND COMMUNICATIONS INSTALLATION AND MAINTENANCE.** A practical guide, especially intended to help Signal Inspectors, Installers, Fitters, Linsmen, Draughtsmen, and all concerned with installing and maintaining Signal, Telegraph, and Telephone Equipment. 416 pp. Many illustrations. Cloth. 8s. By post 8s. 6d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

**INTERNATIONAL RAILWAY ASSOCIATIONS.** Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

**GLOSSARY OF WOOD.** A technical dictionary for all associated with timber and its uses. Ten thousand terms about timber—the common and the little known, the old and the new. Ten thousand definitions covering the entire field of timber and its uses—growth, marketing, utilisation. The commercial timbers, their qualities and uses, tools and wood-working equipment, are all here explained simply, concisely and accurately. Illustrated by many clear line drawings. Price 21s. net. By post 21s. 9d. Tothill Press Limited, 33, Tothill Street, Westminster, London, S.W.1.

**RAILWAY MAINTENANCE PROBLEMS.** By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth. 8½ in. by 5½ in. 82 pp. Diagrams. 5s. By post 5s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

**TRANSPORT ADMINISTRATION IN TROPICAL DEPENDENCIES.** By George V. O. Bulkeley, C.B.E., M.I.Mech.E. With chapters on Finance, Accounting and Statistical Method. In collaboration with Ernest J. Smith, F.C.I.S., formerly Chief Accountant, Nigerian Government Railway. 190 pages Medium 8vo. Full cloth. Price 20s. By post 20s. 6d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

and the B.E.A. is therefore calling on area boards to submit proposals for spreading the increased coal costs among all consumers. This will ensure that the new burden is taken into account, with any other upward tariff adjustments which boards may find necessary.

**Clyde Crane & Booth Limited.**—After meeting all charges the net profit of Clyde Crane & Booth Limited for the year to November last was £70,379, as compared with £63,392 in the previous year. The dividend is raised to 30 per cent.

**Western Region London Lecture & Debating Society.**—Mr. S. G. Hearn, Assistant Operating Superintendent, Western Region, will read a paper entitled "Notes on a Visit to the U.S.A." before British Railways, Western Region, London Lecture & Debating Society on March 1. The meeting will be held in the Headquarters Staff Dining Club, Bishop's Bridge Road, Paddington, W.1, at 5.45 p.m.

**Proposed Pan-Islamic Railway.**—The Minister of the Interior of Pakistan, Mr. Khwaja Shahabuddin, proposed the building of a railway connecting Iran, Syria, Transjordan, Medina, Turkey, and Pakistan, at the World Moslem Conference in Karachi. He said the railway would cost about £52 million sterling. It would help to bring the people of Moslem countries together and improve their trade and cultural relations.

**Manchester Ship Canal Company.**—The directors of the Manchester Ship Canal Company, on February 9, resolved to recommend at the ordinary general meeting on February 26 a dividend of 3½ per cent. on the Manchester Ship Canal Corporation preference stock, and dividends of 5 per cent. on the preference shares and 3 per cent. on the ordinary shares. Net revenue for the year, deducting interest and fixed charges and provision for taxation and reserves, amounted to £343,585, against £330,836 last year.

**Jonas Woodhead & Sons Limited.**—The directors of Jonas Woodhead & Sons Limited are making arrangements for the provision of further finance by an issue of £200,000 of ten-year redeemable unsecured loan stock. Mr. Allan Kyle, Chairman, at the annual general meeting of the company on February 8, pointed out that the increasing cost of raw materials, wages, fuel, transport, and so on, together with substantially increased production, resulted in shortage of working capital. Once again, said Mr. Kyle, their parent company had broken all previous records in both tonnage output and sales value. Their output, indeed, was well over three times that of ten years ago. The company was playing an important role in the export trade, something like 60 per cent. of the total output being exported directly or indirectly

through the manufacturers of railway locomotives and carriages, buses, lorries, and motorcars.

**Increase in "Bradshaw" Price.**—Because of the increased cost of production, it has been found necessary to increase the price of *Bradshaw's Railway Guide*, with effect from the April, 1951, issue, from 5s. to 7s. 6d.

**British Industrial Plastics.**—The aggregate group profits of British Industrial Plastics Limited for the year ended September 30, 1950, amounted to £394,239 before deducting depreciation and other charges. This compares with £291,512 for the previous year. The net profit of £111,201 compares with £90,087 a year ago. A final ordinary dividend of 12 per cent. again makes 20 per cent. for the year.

**United Steel Companies Results.**—An ordinary dividend of 5.0192 per cent. payable on March 28, being the dividend accrued to February 14 on this stock at the rate of 8 per cent. per annum (the maximum rate permitted by the Iron & Steel Act) is to be paid by the United Steel Companies Limited for the current financial year. Ordinary dividends for the year ended June 30 last consisted of an interim of 2½ per cent. and a final of 5½ per cent.

**Durham County Council: the Closed Shop.**—The emergency committee of Labour members of the Durham County Council appointed in November to implement the council's "closed shop" decision regarding union membership of its employees, has held only two meetings; the committee is stated to have recommended that no action be taken against employees who ignore the questionnaire on union membership. Reference to the Engineer's Guild protest against the closed shop policy was made in our December 1 issue.

**Guest Keen Baldwins Iron & Steel Company.**—The directors of Guest Keen Baldwins Iron & Steel Co. Ltd. announce that their stockholders' representative has agreed with the Ministry of Supply the value for compensation purposes of their 6 per cent. redeemable cumulative preference £1 shares at 25s. a share. These shares, of which 1,301,754 have been issued, are not quoted on any stock exchange, and are held as follows: Guest Keen & Nettlefolds, 737,315 shares; Baldwins (Holdings), Limited, 564,439 shares. The value of the ordinary shares has not yet been agreed.

**Developments in Stud Welding.**—Demonstrations of Nelson stud welding are to be given by Crompton Parkinson Limited at 258, Grays Inn Road, London, W.C.1 (by courtesy of Holland & Hannen & Cubitts Limited) on February 19-23, between 10 a.m. and 5 p.m. Methods of fixing by end-welded studs will be demonstrated, and

visitors will have an opportunity of operating the Nelson stud welding gun. Details may be obtained from Crompton Parkinson Limited, Aldwych, W.C.2.

**British Railways Containers at Zurich.**—British Railways are to exhibit six types of containers at the International Container Exhibition to be held at Zurich Tiefenbrunnen Station from April 14 to 23. The exhibition is being arranged by the Swiss Federal Railways on behalf of the Association of Traffic Experts of Switzerland. British Railways now operate the largest number of containers of any European railway and have some 22,000 containers of different varieties in use.

**Improvements at Bletchley Station.**—Work is to start shortly on improvements to Bletchley Station, London Midland Region. Electric lighting will be installed, the booking and parcels offices reconstructed, additional lavatories provided, and the refreshment room on platforms 4 and 5 rebuilt. The appearance of the overbridge will be improved by boxing in, with panelled sites provided for advertising, and elsewhere in the station the advertising display will be modernised. New vitreous enamel name and direction signs will be provided in the approach and throughout the station.

**Railway Ball in Paris.**—The success of last year's "Nuit de la Locomotive," organised by the Inter-Allied Railway Club of Paris and described in our May 5, 1950, issue, has led to the decision to hold another such ball on March 9, in the premises of the Aéro-Club. It is hoped that President Auriol will be present. The price of tickets of admission (including buffet refreshments) is 500 francs, and of sit-down supper 850 francs. Further particulars may be obtained from the Foyer Interallié des Chemins de Fer, 11, Rue de Milan, Paris 9e.

**Institute of Traffic Administration.**—Speaking at the Teesside centre of the Institute of Traffic Administration recently, Mr. L. C. Harrison, Chairman of the National Council, questioned whether any advantage would be gained by setting up area boards under the Road Passenger Executive for the administration of road passenger transport. There was room, however, for closer co-operation between the railways and road passenger services and extension of the use of station yards as bus stations, and the Railway Executive should extend considerably its scheme for the closing of branch lines. Saving on unremunerative lines could then be applied to the reduction of main-line fares.

**George Cohen, Newcastle Branch.**—As from January 20 the raw materials section of the Newcastle branch of George Cohen Sons & Co., Ltd., has been transferred to the Coburn Works at Hebburn-on-Tyne. These extensive premises hav-

ing the Telephone No. 32331, will result in improved service as regards ferrous and non-ferrous scrap materials, steel sections, plate rails, tanks, sleepers, steel and cast-iron piping and so on. The machinery section of the Newcastle branch will remain at Trafalgar House, Collingwood Street, Newcastle-on-Tyne.

**Paris Trade Fair.**—For the first time since the war Great Britain will be represented by a British products stand at the 1951 Foire de Paris (the annual international trade fair) from April 28 to May 14. May 4 will be celebrated as "British Day" with a banquet in honour of British exhibitors presided over by a representative of the French Government. Fifteen other countries will have individual national stands.

**Educational Exhibitions in Steel Manufacture.**—During 1951 a travelling exhibition organised by the Training Committee of the British Iron & Steel Federation will visit a number of important steel centres throughout Britain. The first of the series opened at Swansea on February 13. School-children in each area are being invited and adults interested in education and training will be able to meet men in the industry and discuss common problems.

### Forthcoming Meetings

February 16 (Fri.).—Carlisle & District Transport Club, at the County Hotel, Carlisle, at 7.30 p.m. "Road Haulage Executive: Organisation & Operation," by Mr. N. C. McPherson, Divisional Manager, North Eastern Division, Road Haulage Executive.

February 17 (Sat.).—Permanent Way Institution, Manchester & Liverpool Section, at the Headquarters of the St. John Ambulance Brigade, Chapel Walks, Preston, at 2.30 p.m. "Can We Mechanise Maintenance?" by Mr. W. H. Best, District Engineer, Lancaster, London Midland Region.

February 20 (Tue.).—South Wales & Monmouthshire Railways & Docks Lecture & Debating Society, at the Mackworth Hotel, Swansea, at 6.30 p.m. "Reflections on American Visit," by Mr. L. G. Taylor, Assistant to Chief Docks Manager, Cardiff Docks.

February 21 (Wed.).—Institution of Locomotive Engineers, at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m. "Modernisation of a Large Motive Power Depot, Polmadie, Scottish Region," by Mr. R. F. Harvey, Vice-President of the Institution, and Chief Officer (Motive Power), Railway Executive.

February 22 (Thu.).—Institution of Electrical Engineers. Annual dinner, at Grosvenor House, Park Lane, London, W.1, at 7 for 7.30 p.m.

February 22 (Thu.) to March 22 (Thu.).—Royal Institute of British Architects, 66, Portland Place, London, W.1. "Architecture of Transport Exhibition," open 10 a.m. to 7 p.m. weekdays, 10 a.m. to 5 p.m. Saturdays.

February 23 (Fri.).—Society of Engineers, at 17, Victoria Street, London, S.W.1, at 6.30 p.m. "Some Notes on Bridge Construction," by Mr. J. N. Walker.

February 24 (Sat.).—Permanent Way Institution, London Section, at 296, Vauxhall Bridge Road, S.W.1, at 2.30 p.m. "The Netherlands: Characteristics, Railways and some big Civil Engineering Works," by Mr. B. Van Bilderbeek, Engineering Assistant, Netherlands Railways.

## Railway Stock Market

There has been a large business passing in stock markets, and, generally, values again moved in favour of holders, although British Funds were a notable exception. The gilt-edged market was adopting a waiting attitude pending the start of dealings in the new nationalisation steel stock. In recent weeks the big upswing in Stock Exchange business has arisen in a large measure from substantial selling of steel shares by holders who felt that nationalisation would not be postponed and who realised that the terms of exchange into the new steel stock would involve a big loss of income. Yields on some steel shares were around 5 per cent.; the return on the new steel stock is much below this.

Money arising from selling of steel shares has gone mainly into other industries, some of which have risen, as a result, to levels which it would seem will be justified only if hopes of higher dividends are realised this year. Moreover, these hopes will probably turn in most cases on the extent of tax increases in the next Budget, though on the other hand, steel shares have been bought by many of the big financial institutions as an attractive means of adding to their gilt-edged investments.

In recent weeks this has, indeed, diverted a good deal of business from the gilt-edged market. Prevailing view is that markets generally are likely to remain active in nearly all sections, but that a few weeks prior to the Budget activity will probably slacken, and there may then be a tendency for main attention to be given to mining and other shares of companies registered overseas. In due course it would not be surprising if foreign rail stocks also tend to attract more business. In many cases current market prices are below expected pay-out levels and these stocks can be regarded as cash holdings with reasonable scope for moderate appreciation in price in due course.

Canadian Pacifics have remained a prominent feature, and at the time of writing have risen further to 55½, accompanied by talk of higher freights and also by prospects of a larger return on the Consolidated Mining & Smelting holding. Canadian Pacific preference stock changed hands around 77½ and the debenture around 100½. There has been speculative buying of Manila Rail issues on the view that the

U.S.A. is planning to make the Philippines a big military base; the "A" debentures were 61 and the preference shares 6s. Nitrate Rails at 81s. 3d. responded to the capital return proposals. Taltal Rail shares were 19s. Antofagasta ordinary firmed up to 8 with the preference shares active around 53½. San Paulo 10s. units displayed firmness at 16s. 3d. and Brazil Rail gold bonds were 43½.

There was a revival of speculative buying of United of Havana stocks although there has been no revived rumours of fresh take-over developments. The 1906 debentures moved up to 17½. Bolivar "C" debentures were 57 and La Guaira ordinary stock 83. Great Western of Brazil shares kept at 157s. Mexican railway stocks have been less active; Mexican Central "A" bonds were 60 and National of Mexico 4½ per cent. 41½. French railway sterling bonds were steady again with Midi at 90 and Orleans 88½. There was only moderate business in Leopoldina stocks; the ordinary remained at 11, with the preference at 28½, the 4 per cent. debentures 99½, and the 6½ per cent. debentures 147½. Leopoldina Terminal 5 per cent. debentures were 95.

Business in road transport shares was again on a moderate scale. Southdown were 110s., Lancashire Transport 61s. 3d., West Riding 54s., and Ribble Motor Services 6½ per cent. preference marked 23s. 3d. B.E.T. deferred stock has been firm at £530.

Nationalisation steel shares remained a very active market prior to the exchange into steel stock and were inclined to strengthen in price; buying by big financial institutions this week rather more than offset selling by holders for whom an exchange into a gilt-edged security would give too small a yield. There was a good deal of switching into engineering and other shares not directly threatened by nationalisation.

Guest Keen advanced sharply on the news that compensation for the South Wales steel making subsidiary will be £5½ million. The market is talking of a possible capital return for Guest Keen shareholders. Vickers remained active on higher dividend hopes. Among shares of locomotive builders and engineers Hurst Nelson were 62s. and Birmingham Wagon 33s. Vulcan Foundry were 25s. 6d., Beyer Peacock 26s. 3d., Gloucester Wagon improved to 15s. 7½d., Wagon Repairs were firm at 16s., and North British Locomotive 23s.

Traffic Table of Overseas and Foreign Railways

Railway	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date				
			Total this year	Inc. or dec. compared with 1948/49		Total	Increase or decrease			
						1949/50				
South & Central America	Antofagasta ...	811	4.2.51	£ 107,850	+	£ 41,630	5	£ 503,380	+	£ 157,900
	Costa Rica ...	281	Dec., 1950	c£83,460	+	c£525,677	26	c£180,729	+	c£1,024,867
	Dorada ...	70	Nov., 1950	36,972	+	13,063	48	428,205	+	107,418
	Inter. Ctl. Amer. ...	794	Dec., 1950	\$1,205,407	—	\$54,553	52	\$13,466,226	+	\$1,071,160
	La Guaira ...	22½	Sept., 1950	\$68,726	—	\$39,529	39	\$725,535	—	\$241,943
	Nitrate ...	382	15.8.50	10,816	—	8,656	32	286,336	+	6,203
	Paraguay Cent. ...	274	2.2.51	£226,388	+	£86,463	31	£6,293,826	+	£1,877,033
	Peru Corp. ...	1,050	Dec., 1950	\$7,347,000	+	\$560,800	26	\$46,130,000	+	\$12,334,042
	„ (Bolivian Section)	66	Dec., 1950	Bs.13,328,000	+	Bs.2,616,000	26	Bs.69,914,000	+	Bs.7,044,836
	Salvador ...	100	Dec., 1950	c£246,000	—	c£32,000	26	c£769,000	+	c£39,000
Taltal ...	154	Jan., 1951	\$1,605,891	+	\$141,383	31	\$10,862,693	+	\$1,725,484	
Canada	Canadian National†	23,473	Nov., 1950	17,632,000	+	2,779,000	48	167,883,000	+	16,065,000
	Canadian Pacific†	17,037	Dec., 1950	11,274,000	+	1,235,000	52	126,192,000	+	5,108,000
Various	Barsi Light* ...	167	Dec., 1950	25,137	—	2,955	39	257,055	—	9,900
	Egyptian Delta ...	607	10.10.50	18,245	+	1,296	28	319,911	—	24,005
	Gold Coast ...	536	Dec., 1950	304,770	+	18,020	40	2,263,935	+	83,014
	Mid. of W. Australia	277	Nov., 1950	40,070	+	10,472	22	193,383	+	51,544
	Nigeria ...	1,900	Jan., 1950	502,360	+	38,978	44	5,017,814	+	266,573
	South Africa ...	13,347	6.1.51	1,531,505	+	296,985	39	68,094,555	+	8,737,157
	Victoria ...	4,744	Sept., 1950	1,729,344	+	103,977	13	—	—	—

\* Receipts are calculated at 1s. 6d. to the rupee

† Calculated at \$3 to £1